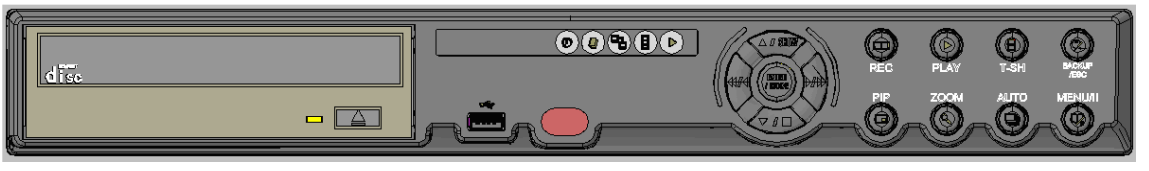
— 4/8/16CH DVR —



This document contains preliminary information and subject to change without notice.

CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of unprotected “Dangerous voltage" within the product's enclosure that may be strong enough to cause a risk of electric shock.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

NOTE: This equipment has been tested and found to comply with the limits for a class digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

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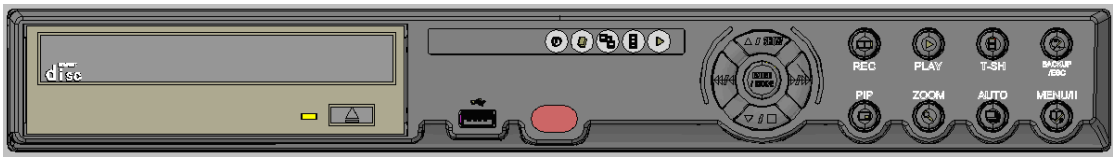
CHAPTER 1　PACKING DETAIL AND INSTALLATION

1-1 PACKING



1. DVR

2. Quick Start

3. IR Remote Control

＊Please press “DVR1”button before operation.

4.Batteries x2

5. CD

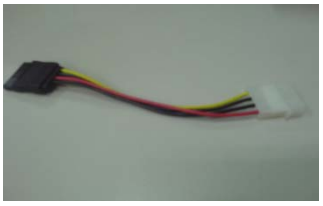
6. Hard Disk Mount x2

7. Screws x20

8. Power Adaptor

9. Power Cord

10. SATA Cord 3pcs for 16ch
2pcs for 8ch/4ch



11.IDE to SATA Cable
(16ch only)

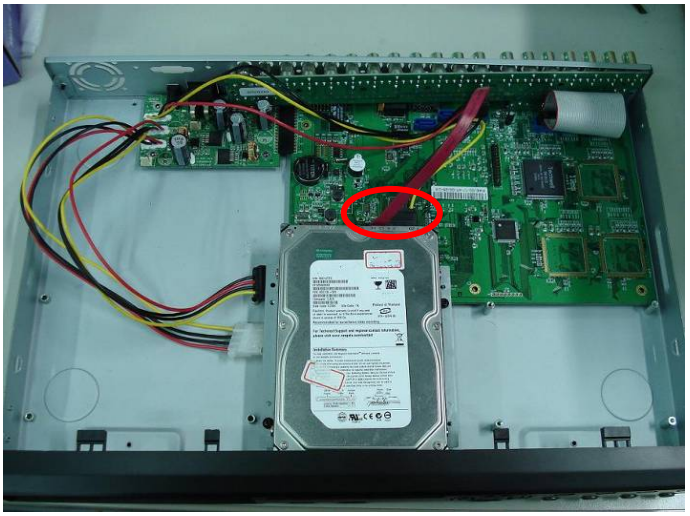
12. DB 26 Flat Cables
(16ch only)

1-2 Hard Disk Installation

Step 1) Fix the HDD to rack mount with the screws as indicated.

Step 2) Place the HDD on the HDD plate and screw it as indicated.

Step 3) Connect the power and the SATA cables as indicated.

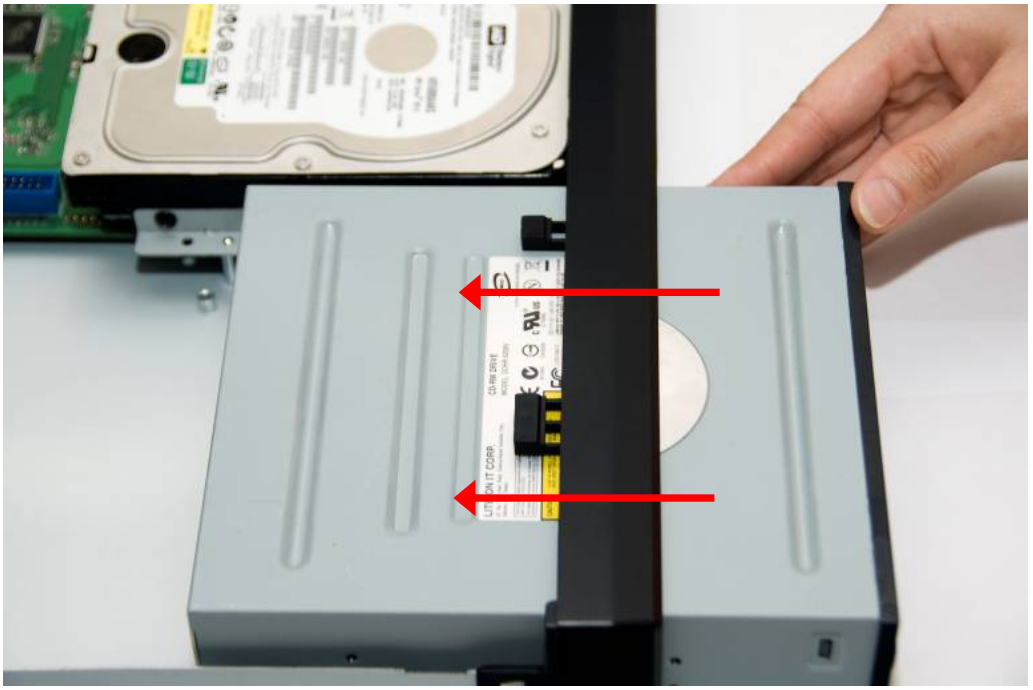


Note: After installation, please initialize Hard Disk before starting to record. For more detailed information, please check out User Manual 4-9 System Tools for reference.

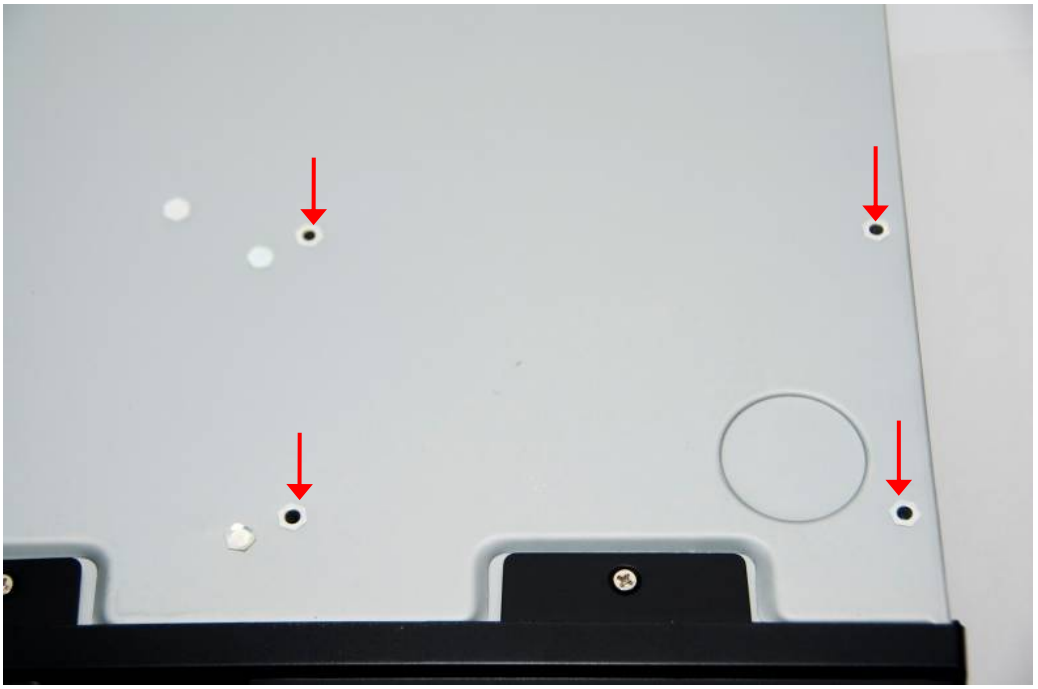
1-3 DVD-RW Installation

Step 1) Remove the front cover from DVR.

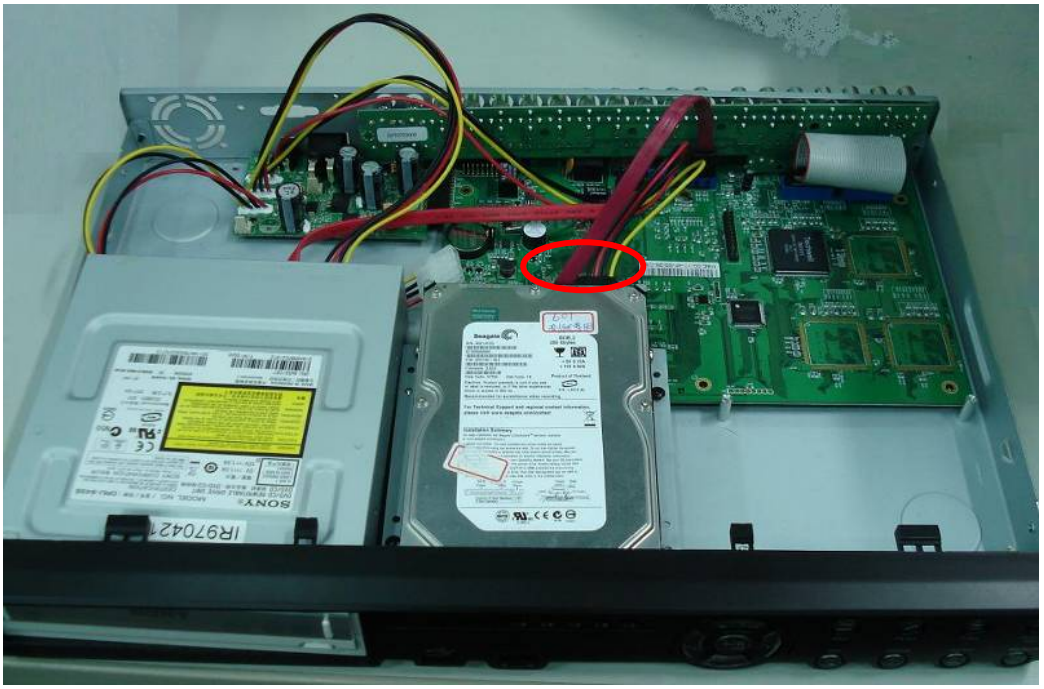
Step 2) Put the DVD-RW into the DVR as indicated by the arrow.



Step 3) Screw the bottom of the DVR as indicated to fix the DVD-RW.

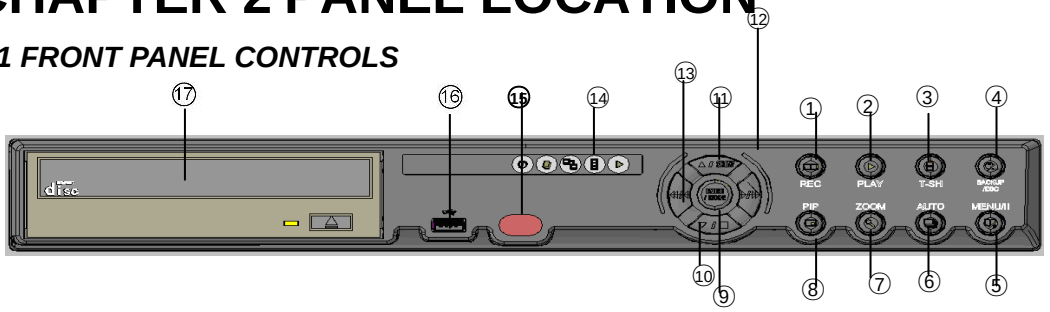


Step 4) Connect the power and the SATA cables.



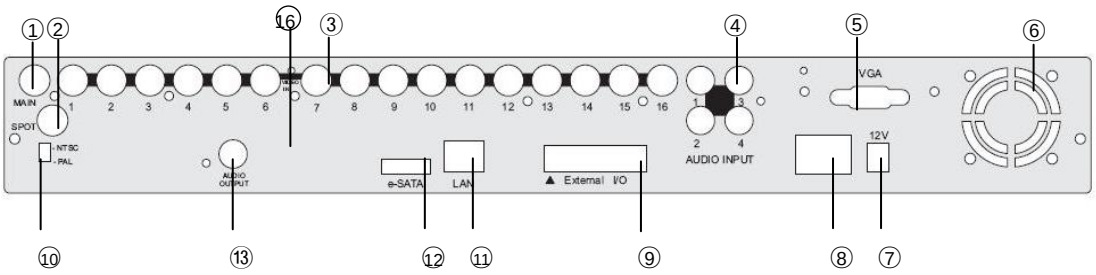
CHAPTER 2 PANEL LOCATION

2-1 FRONT PANEL CONTROLS



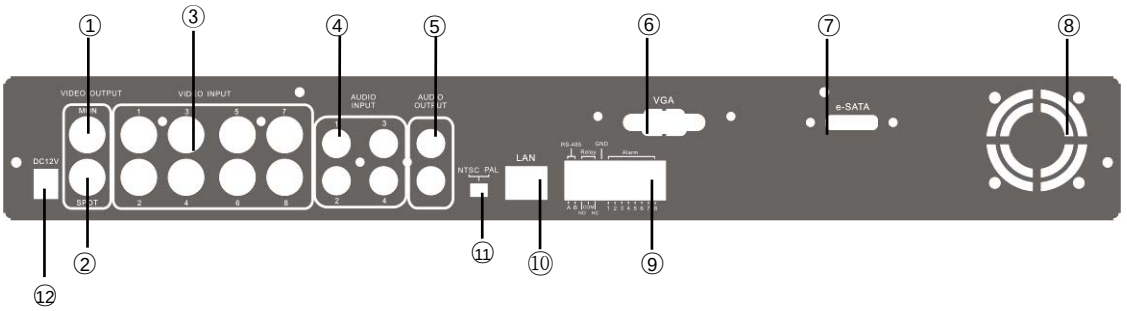
Control Keys	Description
① REC	Start or stop recording.
② PLAY	Play back in normal speed.
③ T-SRH	Display the search menu.
④ BACKUP/ESC	In LIVE mode, press to display the BACKUP menu. In SETUP mode, press to return to previous page.
⑤ MENU/ ▮▮	In LIVE mode, press to display menu. In PLAYBACK mode, press to pause playback.
⑥ AUTO	In LIVE mode, cycle through all channels in full screen.
⑦ ZOOM	In LIVE or PLAYBACK mode, enlarge the display of a channel.
⑧ PIP	In LIVE mode, display with picture in picture format.
⑨ ENTER/MODE	In SETUP mode, press to enter values. In PLAYBACK mode, switch between full, quad, 9-channel, 16-channel display in order.
⑩ ▼ / ■	In SETUP mode, press to move cursor down. In PLAYBACK mode, press to stop playing back.
⑪ ▲ / SLOW	In SETUP mode, press to move cursor up. In PLAYBACK mode, press to slow down.
⑫ ► /►►	In SETUP mode, press to increase value. In PLAYBACK mode press to play forwards.
⑬ ◄ /◄◄	In SETUP mode, press to reduce value. In PLAYBACK mode, press to play rewind.
⑭ LED Display (From left to right)	**Power**: Power is on. **HDD**: Hard disk is in use. **LAN**: Connected to the internet *(in red)*: Remote user logged in. **REC**: Recording. **PLAY**: Playing back.
⑮ IR Sensor	Input sensor for the remote control.
⑯ USB 2.0 Port	Port for USB external devices.
⑰ DVD Writer	Optional DVD-RW (CD-RW) backup device.

2-2 16CH REAR PANEL CONNECTORS

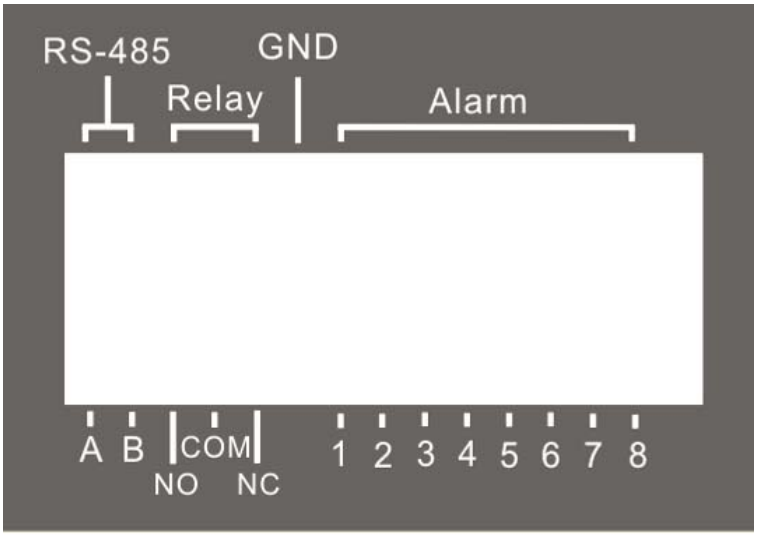


① MAIN monitor	BNC port for the main monitor.
② SPOT monitor	BNC port to display full screen image of all installed cameras in sequence.
③ VIDEO IN	BNC input ports for cameras, 16 in total.
④ AUDIO IN	RCA input port for audio signal. There are 4 ports available. (corresponding to channel 1 to 4)
⑤ VGA	VGA port.
⑥ Fan	DC 12V 40mm X 40mm fan.
⑦ DC 12V	Socket for a DC 12V input.
⑧ POWER	Power switch.
⑨ EXTERNAL I/O	EXTERNAL I/O port for DB 26 flat cables. (*Please refer to the APPENDIX II for pin definition.)*
⑩ NTSC／PAL Switch	Switch between NTSC and PAL format.
⑪ LAN	Network port.
⑫ E-SATA	External SATA hard disks port.
⑬ AUDIO OUT	RCA output for audio signal.

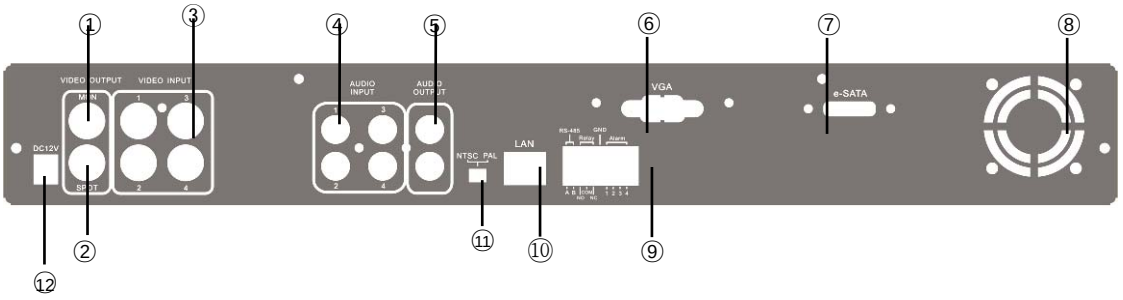
2-3 8CH REAR PANEL CONNECTORS



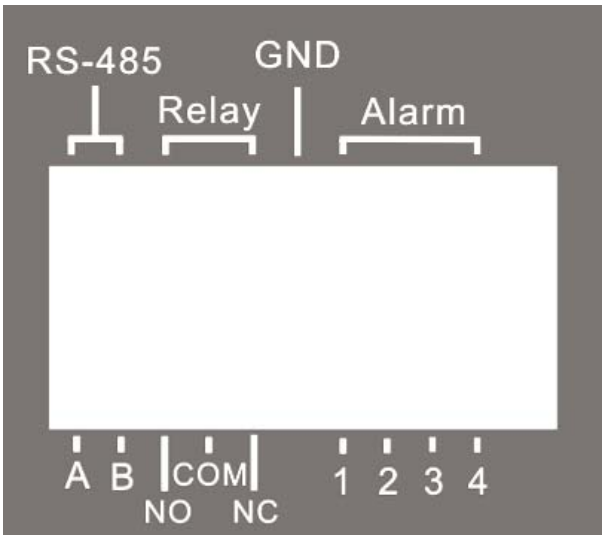
① MAIN monitor	BNC port for the main monitor.
② SPOT monitor	BNC port to display full screen image of all installed cameras in sequence.
③ VIDEO IN	BNC input ports for cameras, 8 in total.
④ AUDIO IN	RCA input port for audio signal. There are 4 ports available. (corresponding to channel 1 to 4)
⑤ AUDIO OUT	RCA output port for audio signal.
⑥ VGA	VGA port
⑦ E-SATA	External SATA hard disks port.
⑧ Fan	DC 12V 40mm X 40mm fan
⑨ EXTERNAL I/O	EXTERNAL I/O port *(see below for pin definition)*
⑩ LAN	Network port
⑪ NTSC／PAL switch	Switch between NTSC and PAL format.
⑫ DC 12V	Socket for a DC 12V input.



2-4 4CH REAR PANEL CONNECTORS



① MAIN monitor	BNC port for the main monitor.
② SPOT monitor	BNC port to display full screen image of all installed cameras in sequence.
③ VIDEO IN	BNC input ports for cameras, 4 in total.
④ AUDIO IN	RCA input port for audio signal. There are 4 ports available. (corresponding to channel 1 to 4)
⑤ AUDIO OUT	RCA output port for audio signal.
⑥ VGA	VGA port
⑦ E-SATA	External SATA hard disks port.
⑧ Fan	DC 12V 40mm X 40mm fan
⑨ EXTERNAL I/O	EXTERNAL I/O port *(see below for pin definition)*
⑩ LAN	Network port
⑪ NTSC／PAL Switch	Switch between NTSC and PAL format.
⑫ DC 12V	Socket for a DC 12V input.



CHAPTER 3 LIVE, PLAYBACK AND PTZ OPERATIONS

The IR remote control and mouse operate differently under each mode; this chapter describes the functions of them under three different modes: LIVE, PLAYBACK and PTZ.

3-1 LIVE Mode

You can monitor all the channels, listen to audio signal and have some related operations under *LIVE* mode. This paragraph describes the IR remote control, mouse operation and on screen graphical icons under LIVE mode.

Table 3-1.1 Functions of remote control under LIVE mode

Button	Description
REC	Start/Stop recording.
PLAY	Start playing back the most recently recorded segment.
LOCK	Enable/Disable the Keypad function
1,2,3,4	Select the channel to monitor in full screen
FREEZE	Turn on/off screen freeze function.
	Switch to quad display.
	Switch to 9-channel display. 4ch DVR doesn't feature this function.
	Switch to 13-channel display. 4ch DVR doesn't feature this function.
	Switch to 16-channel display. 4ch DVR doesn't feature this function.
ENTER/MODE	Switch to full screen, quad display.
MENU/	Enable/ Disable setup Menu.
BK-UP/ESC	Enable/ Disable backup menu.
SRH	Enable/ Disable search menu.
MUTE	Switch channel 1 output audio / turn off LIVE audio
STATUS	Enable/ Disable Status.
OSD	Turn on/off the screen display
Zoom/Zoom -	Enable/ Disable double screen size display. You can click on the channel name for choosing a specific channel.
PIP/Zoom +	Turn on picture-in-picture format. Click on the channel name can switch to other channels.
PTZ	Enable PTZ control.
AUTO	In AUTO mode, all available channels will be cycled through in full screen.
DVR1,2,3,4	Switch DVR ID1~4＊

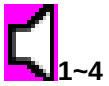
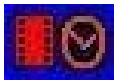
＊PTZ communication protocols from different brands aren't compatible 100% sometimes. Therefore, some of these functions may be unavailable.

Table 3-1.2 Graphical icons that will display after right-clicking your mouse under LIVE mode.

Icon	Description
	Resting the cursor on this icon will bring up the following four menu icons.
	Main menu.
	Search menu.
	Backup menu.
	PTZ mode.
	Turn on/off recording.
	Playback.
	Resting the cursor on this icon will bring up the following five display icons.
	FREEZE.
	PIP, picture in picture
	ZOOM, double the screen size
	AUTO-sequence
	LOCK, activate the key lock.
	Full screen display.
	Quad display.
	9-channel display.
	13-channel display.
	16-channel display.

Note：4CH will show quad display; 8 CH will show quad display and 9-channel display.

Table 3-1.3 Description of on screen graphical icons in LIVE mode

Icon	Description
	Recording is on
 1~4	Live Audio is on
	Live Audio is off
	Motion detected on the channel
	Sensor triggered on the channel
	Video loss detected on the channel
	USB device detected
	DVD burner is detected
	Connected to the LAN cable.
	Timer recording is on Red：Timer is set and recording has been started White：Timer is set but recording has not yet been started
	AUTO-seq is on
2X	2X zoom in is on
	Freeze is on, screen is frozen
	LOCK is on
	PTZ control is on
1~8	IR remote signal has been set to 1-8 to correspond to your 1-to-8 remote control. Meanwhile, the standard remote control can't control DVR under this situation. It can only be controlled by1-to-4 or 1-to-8 remote controls (optional device).

3-2 PLAYBACK Mode

Switch to PLAYBACK mode by pressing “PLAY” under the LIVE mode, the graphical icon will show up on the upper center of the screen and the operation panel (see below picture) will show up at right lower corner of the screen. You can drag the panel by mouse to place it on any location of your screen.

Table 3-2.1 Remote control functions under the PLAYBACK mode

Button	Description
ENTER / MODE	Switch to full screen, quad, 9-channel or 16-channel display.
MENU / ▮▮	Turn on/off PAUSE.
PLAY	Play back at normal speed.
▲ / SLOW	Play back at slower speed. The speed will be slowed to 1/2, 1/4, 1/8, 1/16 by each pressing of the button till the slowest limitation of 1/16 of the normal speed. Current playback speed is shown in the upper center of the screen.
◀◀ / ◄	Fast rewind. Each press increases the speed to the next level. There are six speeds: 2x, 4X, 8X, 16x, 32X and 64X.
▶▶ / ►	Fast forward. Each press increases the speed to the next level. There are six speeds: 2x, 4X, 8X, 16x, 32X and 64X.
▼ / ■	Stop playback.

Table 3-2.2 The mouse operation under the PLAYBACK mode.

Icon	Description
	「◀◀ / ◀」 Fast rewind
	「▶▶ / ▶」 Fast forward
	Play/pause
	「▲ **/ SLOW**」，slow playback
	「▼ / ■」stop playback
	Playback channel by channel with snap shot display
	Full screen display
	Quad display
	9-channel display
	16-channel display

Note：4CH will show quad display; 8 CH will show quad display and 9-channel display.

3-3 PTZ Mode

Switch to the PTZ mode by pressing “PTZ” button under the LIVE mode. The PTZ icon will appear on upper left side of screen and the control panel will appear on the down right side of screen.

Table 3-3.1 Remote Control functions under the PTZ mode

Button	Description
▲ / SLOW	Move PTZ up.
▼ / ■	Move PTZ down.
◀◀ / ◀	Move PTZ to the left.
▶▶ / ▶	Move PTZ to the right.
ZOOM +	PTZ zoom-in.
ZOOM -	PTZ zoom-out.
FOCUS +	PTZ focus-in.
FOCUS -	PTZ focus-out.
IRIS +	PTZ iris-open.
IRIS -	PTZ iris-close.
TOUR	Activate PTZ pre-set tour. ＊
PRESET+ Number	Setup the Preset location Press “**PRESET**” key first then two-digit number; DVR will set the current PTZ location at entered preset number.
PLAY+ Number	Go to Preset location Press “**PLAY**” key first then two-digit number, PTZ will go to the correspondent preset number location.
PIP	Set current PTZ location as the start of line-scan. ＊
FREEZE	Activate auto line-scan. ＊
ZOOM	Set current PTZ location as the end of line-scan.＊

＊PTZ communication protocols from different brands aren’t compatible 100% sometimes. Therefore, some of these functions may be unavailable.

Table 3-3.2 Mouse operation under the PTZ mode

Icon	Description
	Leave PTZ Mode，back to the LIVE mode
	Pre-set number N. (1~64)
	Go to pre-set number N.
	Set current PTZ location at pre-set number N.
	「TOUR」, press to activate pre-set tour＊
	「PIP」, Set current PTZ location as the start of line-scan. ＊
	「FREEZE」, Activate line-scan. ＊
	「ZOOM」, Set current PTZ location as the end of line-scan. ＊
	To move PTZ in 360°
	PTZ zoom in; PTZ zoom out
	PTZ focus in; PTZ focus out.
	PTZ IRIS open, PTZ IRIS close.
Below functions need support from specific PTZ manufacturer. Please check user manual of your PTZ for more detail.	
	AUX 1,「AUTO」Key ＋ Number key「1」
	AUX 2,「AUTO」Key ＋ Number key「2」
	AUX 3,「AUTO」Key ＋ Number key「3」
	AUX 4,「AUTO」Key ＋ Number key「4」
	AUX 5,「AUTO」Key ＋ Number key「5」
	AUX 6,「AUTO」Key ＋ Number key「6」
	AUX 7,「AUTO」Key ＋ Number key「7」
	AUX 8,「AUTO」Key ＋ Number key「8」
	「Backup」, Customized function。

＊PTZ communication protocols from different brands aren't compatible 100% sometimes. Therefore, some of these functions may be unavailable.

CHAPTER 4 MAIN MENU SETUP

To enter the main menu and set up DVR, log-in account and user password are required. The default password of the administrator is “**123456**”. Please check the “Account Setup” for related setup of other log-in users.

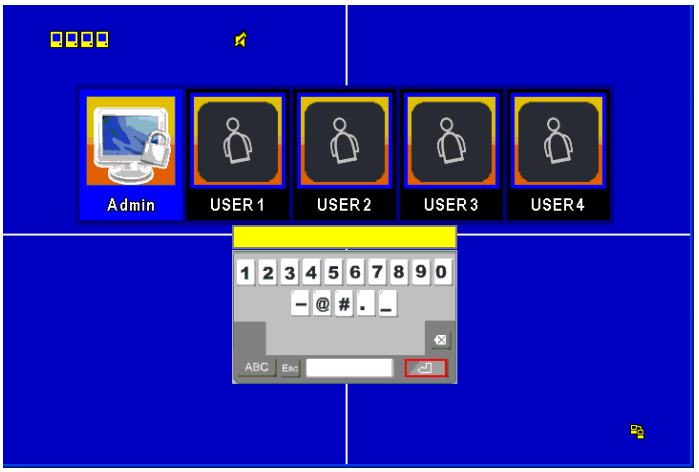


Table 4-0.1 Some definition of virtual keyboard.

Item	Description
	Switch between capital and small letters.
	Switch between numbers and letters.
	Press to cancel the setup, and re-choose the login account.
	Delete the last character.
	Enter to identify the password. It will enter the set up menu, If the password is verified.

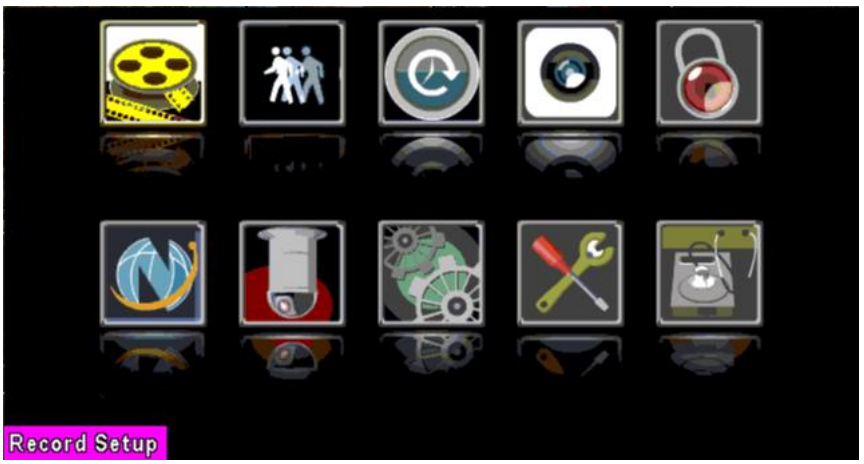
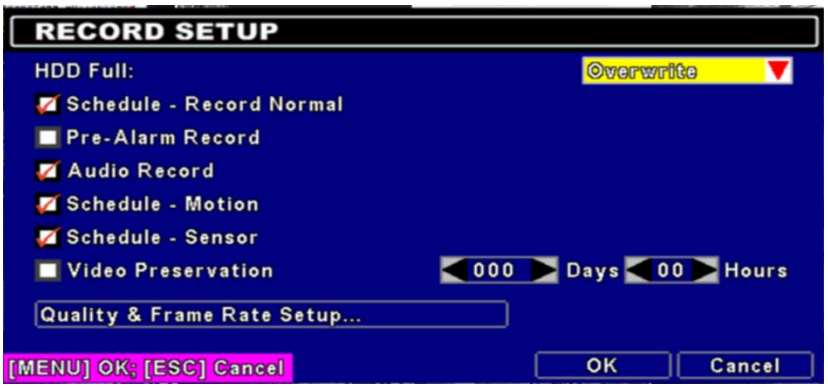


Table 4-0.2 The operation of remote control under the setting menu

Item	Description
◄ ►	Switch to different options under one item
▲ ▼	Switch to different items
MENU	Save setup and back to LIVE mode
ESC	Back to Upper level of menu without saving
ENTER	Enter the menu, or display virtual keyboard

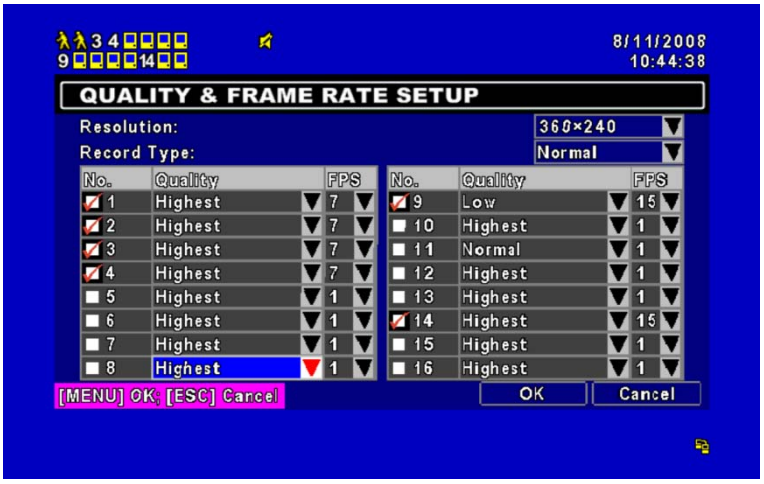
*PS. The initialization of new-installed HD is required before recording, please refer to "**4-9 UTILITY SETUP**" for detail.*

4-1 RECORD SETUP



Item	Description
HDD FULL	Select STOP to stop recording or OVERWRITE to reuse the HDD when HDD is full 「**Stop**」: Stop Recording 「**Overwrite**」: Start to overwrite that begin from the oldest data of HDD, and continue to record.
Record Normal	Enable/Disable normal recording
Pre Alarm Record	Enable/Disable pre-event recording while motion or sensor is triggered but not in the recording mode. The pre-recording time is approximate at 10 seconds (16 MB).
Audio Record	Enable/Disable Audio recording.
Record Motion	Enable/Disable recording while Motion is detected
Record Sensor	Enable/Disable recording while Sensor is triggered
Video Preservation	Setup the video preservation period. Recorded video will be deleted automatically after expiry of preservation period.
Quality & Frame Rate Setup	Setup the quality and frame rate for each channel under normal recording and event recording type.

4-1.1 Quality & Frame Rate Setup



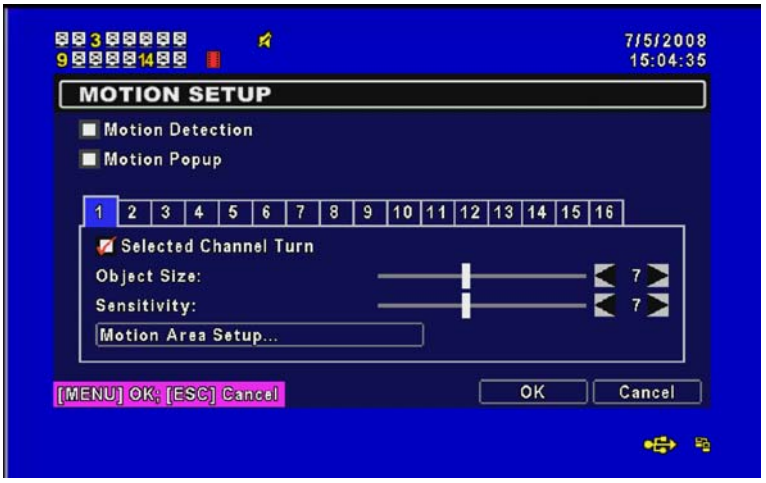
Note：4CH DVR will display 4 channels and 8CH DVR will display 8 channels.

Item	Description
Resolution	Choose record resolution from : CIF / HD1(2CIF) / D1.
Record Type	You can setup quality and FPS separately for record type.
No.	Check/uncheck the box will enable/disable recording of that channel.
Quality	Choose from Lowest/ Low/ Normal/ High/ Highest
FPS	Choose recording frame rate.

4-2 EVENT SETUP

Item	Description
Alarm Duration (Seconds)	Set up alarm duration in seconds. Drag the white bar or press ◄ ► to adjust value.
Motion Setup	Enter to set up motion detection
Sensor Setup	Enter to set up sensor detection

4-2.1 MOTION SETUP

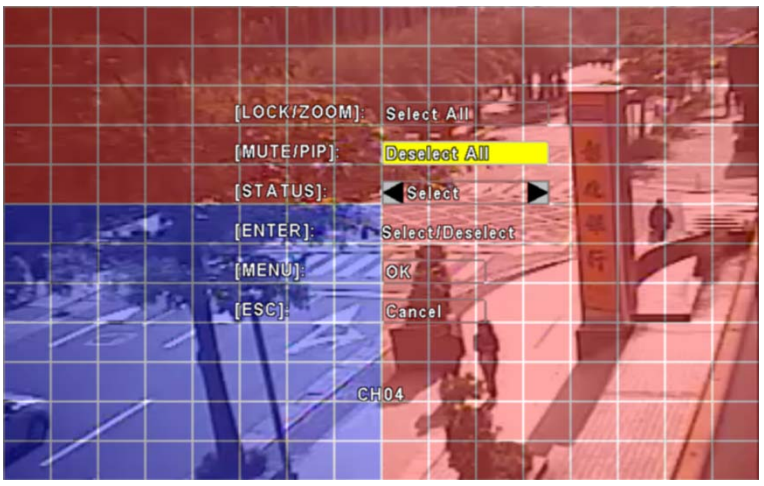


Item	Description
Motion Detection	Check the box to Enable/Disable Motion Detection for all channels.
Motion Popup	Check the box to Enable/Disable popup screen function for all channels. When motion is detected in LIVE mode, the detected channel image will pop up in full screen display.
1~16	You can setup independently for each channel.
Selected Channel Turn	Check the box to Enable/Disable motion detection for each channel.
Object Size	Drag the white bar or press ◄ ► to set up Object Size from value 1 to 15 for each channel. The lower value you set the higher sensitivity it will be. Value set up as 1, the motion will be detected easiest.
Sensitivity	Drag the white bar or press ◄ ► to set up Sensitivity from value 1 to 15 for each channel. The lower value you set the higher sensitivity it will be
Motion Area Setup	Enter to setup motion detection area

Note：4CH DVR will display 4 channels and 8CH DVR will display 8 channels.

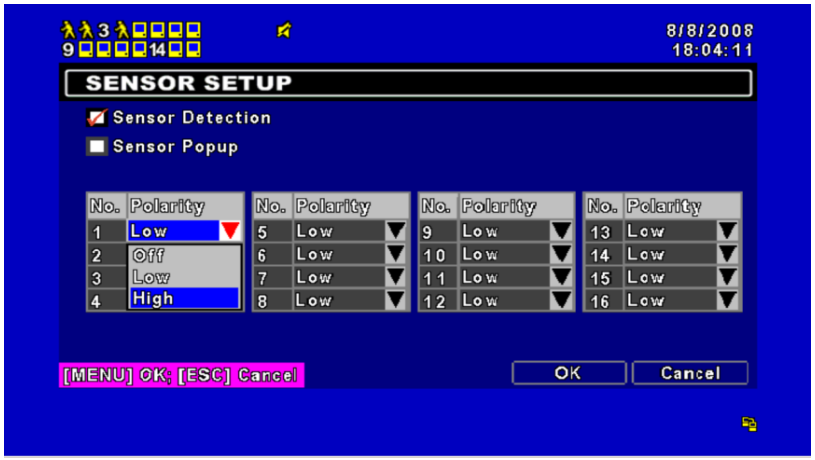
4-2.1.1 MOTION AREA SETUP

The motion detection has been divided into 16x12 grids. The default detection area is full screen as it marked in transparent for local DVR and purple for remote access. Areas deselected for motion detection are marked in red for both local and remote site.



Item	Description
LOCK/ZOOM	Press LOCK/ZOOM to select entire screen as detection area.
MUTE / PIP	Press MUTE/PIP to deselect entire screen as detection area.
STATUS	Switch between “select” and “deselect” for cursor-dragging function
ENTER	Press to function on the selected area with assigned status
MENU	Press to save the setup and leave
ESC	Press to cancel the setup and leave

4-2.2 SENSOR SETUP



Item	Description
Sensor Detection	Check the box to Enable/Disable sensor detection for all channels.
Sensor Popup	Check the box to Enable/Disable popup screen function for all channels. When Sensor is detected in LIVE mode, the detected channel image will pop up in full screen display.
Sensor Polarity	Click or press ▼ to select between HIGH, LOW voltage for triggering sensor detection or OFF to turn off polarity for each channel **Low** Polarity：Sensor has not been triggered. When connected, sensor will be turned on.. **High** Polarity：Sensor has been triggered. When connected, sensor status will be turned off.. **Off** ：Sensor is deactivated, and will not be turned on/off.

Note：4CH DVR will display 4 channels and 8CH DVR will display 8 channels.

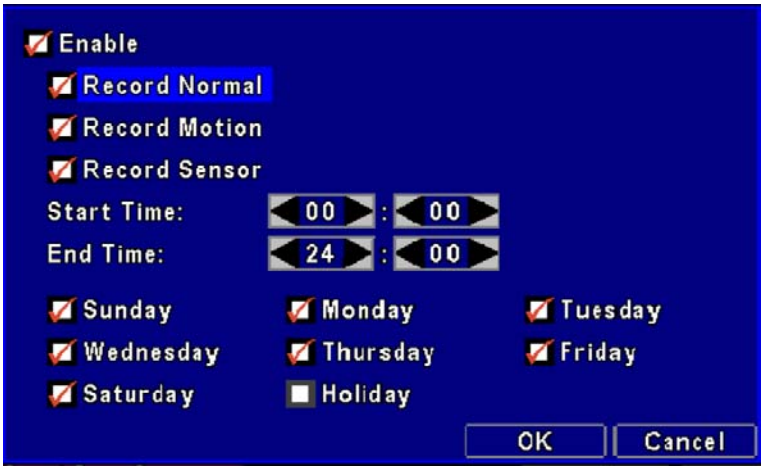
4-3 SCHEDULE SETUP

Except from starting recording manually, you can also setup the recording time by weeks and schedule including normal, motion detect, and sensor detect recording type.

Item	Description
Page	Click or press ▼ to select Page. Each page provides 10 schedules for setup. 5 pages in total.
Holiday Setup	Enter to setup holiday, up to 50 days, other than weekends,.
View Event Setup	View Normal/ Motion / Sensor Setup

4-3.1 Schedule Record Setup

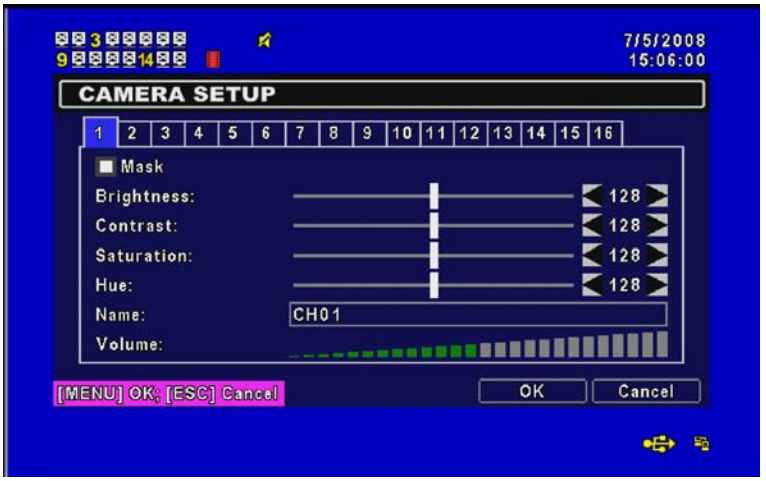
Click on the time on the left side. The setup menu will be displayed. You can have detail setup by dates, Time and event.



4-3.2 Holiday Setup

Since holidays are different by different country and region, you can setup the holiday of your location accordingly.

4-4 CAMERA SETUP



Item	Description
1~16	You can setup independently for each channel. ***Note： 4CH DVR will display 4 channels and 8CH DVR will display 8 channels.***
Mask	Check the box to Enable/Disable mask function for LIVE mode
Brightness	Drag the white bar or press ◄ ► to adjust Brightness of your camera from value 1 to 255. The default value is 128.
Contrast	Drag the white bar or press ◄ ► to adjust Contrast of your camera from value 1 to 255. The default value is 128.
Saturation	Drag the white bar or press ◄ ► to adjust Saturation of your camera from value 1 to 255. The default value is 128.
Hue	Drag the white bar or press ◄ ► to adjust Hue of your camera from value 1 to 255. The default value is 128. (**This function doesn't support at PAL system**)
Name	Set up name of each channel
Volume	Audio volume for CH1 to CH 4 under LIVE mode and recording mode can be adjusted.

4-5 ACCOUNT SETUP

The Account Setup menu is used to provide role-based permission independently setting for each user (maximum of 4 users) to access DVR over network. The default admin account and password is **"admin"** and "**123456**"

The default password remains the same after firmware upgrade, however, it requires 8-digits for password length when you setup a new one

Item	Description		
Auto Lock	After one minute without any action, the DVR will switch to *LIVE* mode automatically. Auto lock can function differently according to the setting below.		
	Function / Setting	Auto Logout (Note1)	Key Lock (Note2)
	Key lock	○	○
	Key unlock	○	×
	Disable	×	×
No.	Check to activate the user's account.		
Password	Set up password for each user. Password is 8-digits required and can be mixed by letters and numbers with case-sensitive.		
Permissions	Set up Permissions for each user。		
Change Admin Password	Change administrator's password		

There are three options: Disable, key unlock, key lock

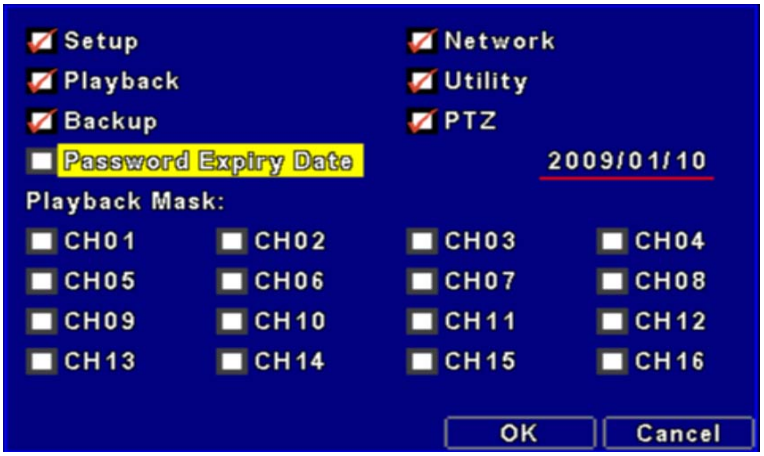
Note 1: When logged out automatically, you will have to operate in limited authority such as operations like: Freeze the screen, Picture in picture, Zoom in/ out, switch between channels…etc. If you need to enter the Setup menu, Search menu, backup menu, Record…etc, user's account and password are required.

Note 2: When the key lock automatically, remote control and mouse can't function before entering verified password.

Note 3:「○」: Enable the function, 「×」: Disable the function

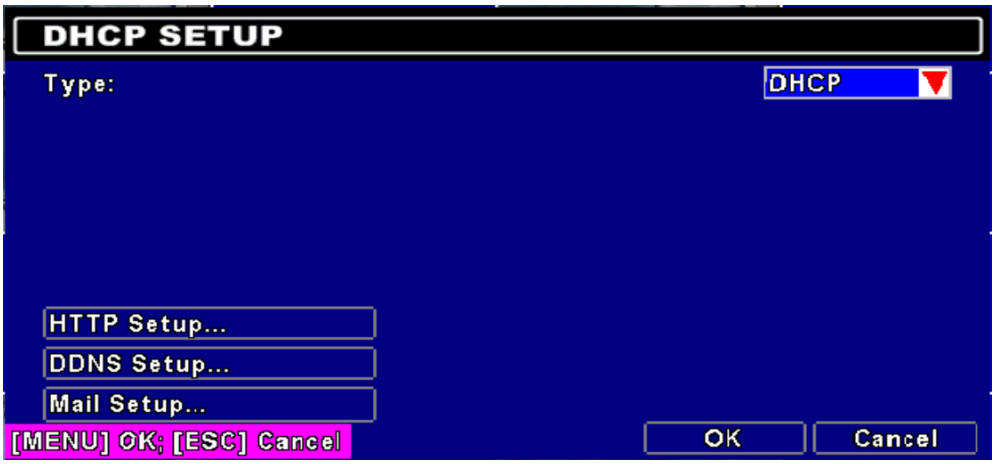
4-5.1 Permission Setup

The Account Setup is set to provide individual user (maximum of 4 users) role-based permissions, including access to Setup menu, Network operation, PTZ function, Playback, Utility, Backup, Password expiry date and Mask on specific channels while playing back.



Note：4CH DVR will display 4 channels and 8CH DVR will display 8 channels.

4-6 NETWORKING SETUP



Item	Description
Connect type	Setup mode for network connection: **DHCP**、**LAN**、**ADSL**.
HTTP Setup	Enter to set up HTTP for remote access into DVR.
DDNS Setup	Enter to Enable/Disable DDNS function and set up.
Mail Setup	Enter to enable/disable Email notification and setup. There are up to 10 email addresses can be notified with different event options.

4-6.1 NETWORKING SETUP

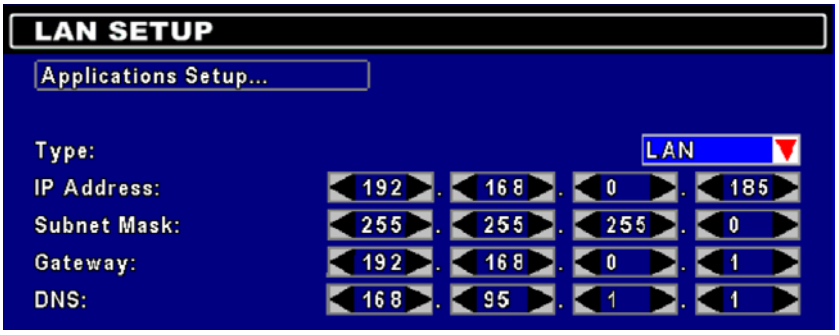
The DVR supports DHCP, LAN and ADSL accesses for network connection. If the settings are subsequently changed, pressing “PLAY” button to drive new settings for re-connection is required.

4-6.1.1 DHCP

If the DHCP option is used for DVR network connection, an IP address is assigned by the DHCP server automatically.

4-6.1.2 LAN

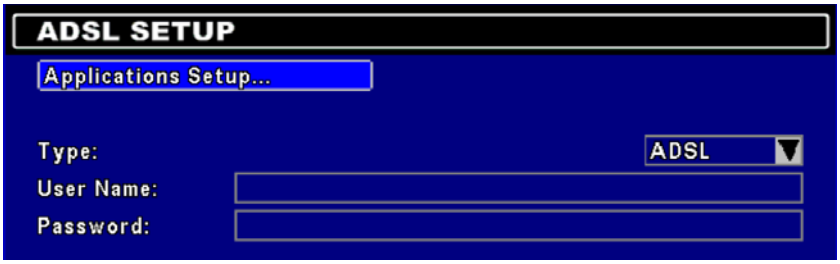
Select LAN for network connection, the following information is required.



Item	Description
IP Address	Enter IP address provided by ISP
Subnet Mask	Enter IP address of Subnet Mask provided by ISP
Gateway	Enter IP address of Gate way provided by ISP
DNS	Enter DNS address provided by ISP. (Note: The correct DNS address must be entered for DDNS function).

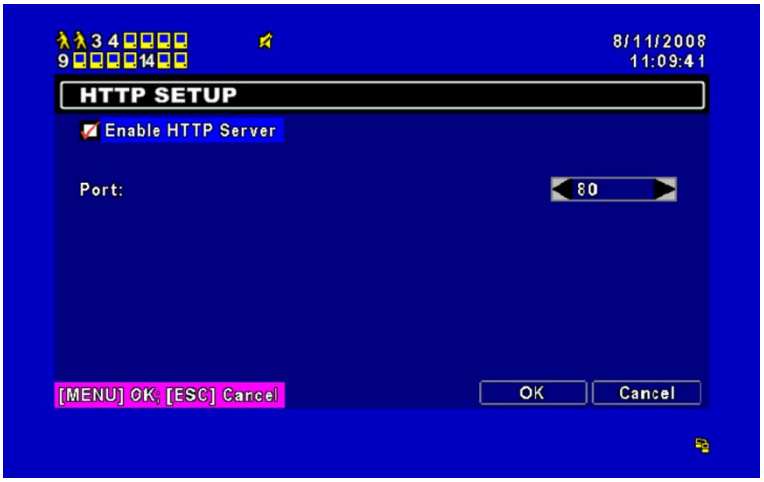
4-6.1.3 ADSL

Select ADSL for network connection, the following information is required.



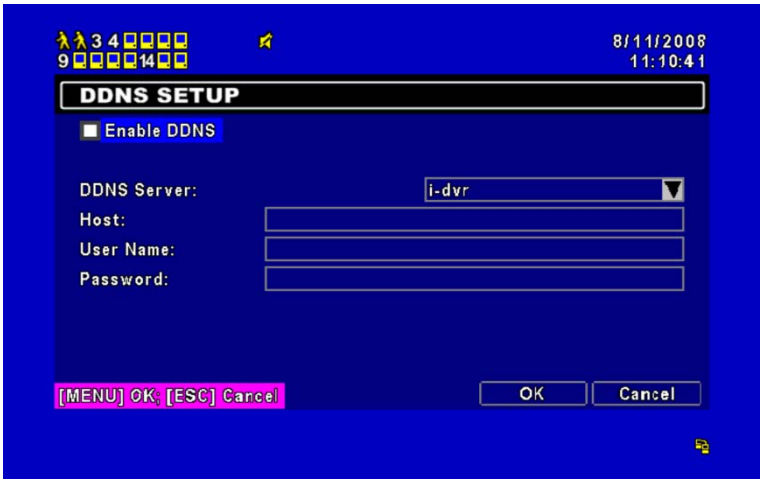
Item	Description
User Name	Enter user name provided by ISP
Password	Enter password provided by ISP

4-6.2 HTTP Setup



Item	Description
Enable HTTP Server	Check to enable HTTP server. Users can remotely access into the DVR over the network if the HTTP function is activated.
Port	Enter a valid port value from 1 up to 65000. The default value is 80.

4-6.3 DDNS Setup

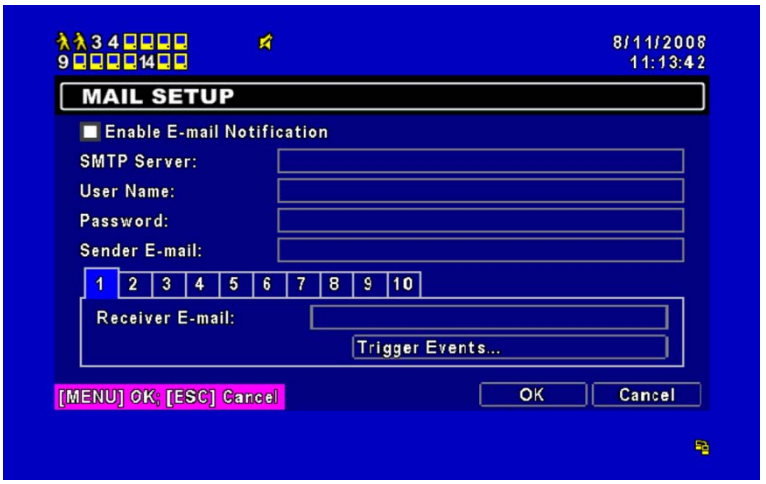


Item	Description
Enable DDNS	Check/Uncheck to enable/disable DDNS function.
DDNS Server	Enter the registered SMTP Server: **DYNDNS.ORG**、**NO-IP.ORG**、**CUSTOM.COM**、**3322.ORG** **I-DVR.NET**＊
SMTP Server	Enter the registered SMTP Server.
User Name	Enter user name.
Password	Enter password.

＊ For more detailed I-DVR.NET operation instruction, please refer to appendix I.

4-6.4 Mail Setup

E-mail can be used as a form of notification when an event occurs (VLOSS, MOTION, SENSOR).



Item	Description
Enable E-mail Notification	Check the box to enable/disable E-mal Notification function.
SMTP Server	Enter to set up SMTP Serve name.
User Name	Enter to set up User Name.
Password	Enter to set up Password.
Sender E-mail	Enter to set up e-mail address of receivers.
E-mail address	Enter to set up e-mail addresses for up to 10 receivers individually.
Trigger Event	Enter to select events to send out E-mail notifications when below circumstances happen: Motion, Sensor and Vloss (Video Loss).

4-6.5 MSN Setup

MSN will send out a message when there is an event occurred. (VLoss, Motion, Sensor).

Icon	Description
Enable MSN Notification	Check/Uncheck to enable/disable MSN notification.
MSN Account	MSN account to be logged in.
Password	account password to log into MSN.
MSN Receiver	MSN account to receive event notification messages.

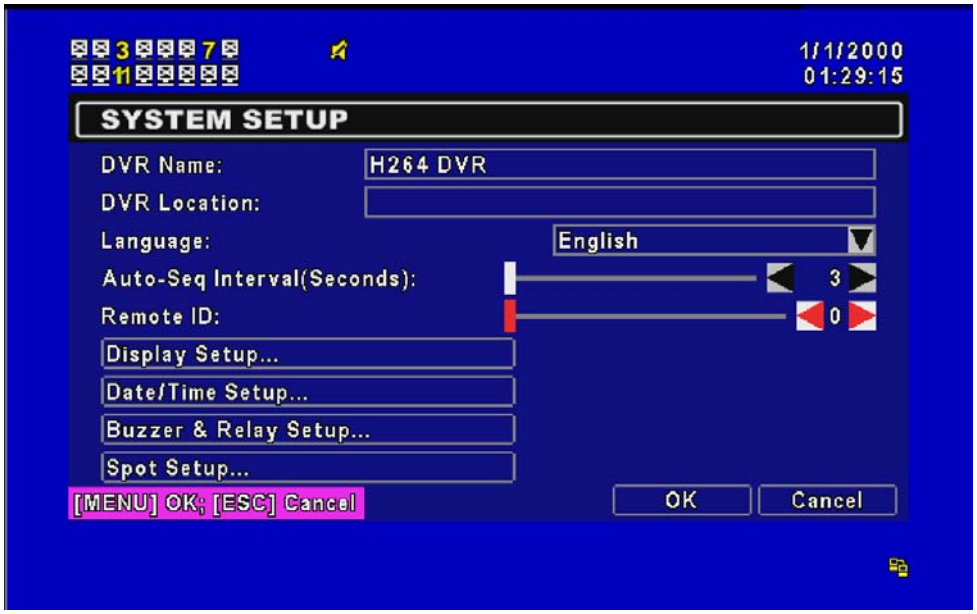
4-7 PTZ & RS485 SETUP

The DVR allows users to control PTZ functions of your camera. To enable PTZ function, the 485 cable should be connected to the RS-485 port of DVR.

Item	Description
Enable PTZ	Click the box to Enable/Disable PTZ function for each channel.
Protocol	Set up the protocol of PTZ cam. The supported protocol are **PELCO-P, PELCO-D, KND, LI-LIN, SAMSUNG, LG.**
PTZ ID	Click or press ◄ ► to set up PTZ ID. The valid ID value is from 1 to 64.
Baud Rate	Select Baud Rate for PTZ from 2400、4800、9600

Note：4CH DVR will display 4 channels and 8CH DVR will display 8 channels.

4-8 SYSTEM SETUP



Item	Description
DVR Name	The name of DVR will be shown when users login from remote access.
DVR Location	The location of DVR will be shown when users login from remote access
Language	Click or press ▼ to select OSD language from English, Traditional Chinese, Greek, Italian, Japanese, Portuguese, Spanish, German, French, simplified Chinese, Russian or Polish.
Auto-Seq Interval (Seconds)	Click or press ◄ ► to set up duration time in seconds for the interval between channels under Auto-Seq mode.
Remote ID	Default ID is 1. When DVR is controlled by standard remote control, please press “DVR1＊” before using it. When more than one DVRs are purchased, the DVRs can be numbered from 1 to 4. For instance, standard remote control can’t operate DVR numbered 3. It only responds when “DVR3” button has been pressed beforehand.
Display Setup	Enter to set up Display
Date/Time Setup	Enter to set up Date/Time
Buzzer & Relay Setup	Enter to set up Buzzer & Relay
Spot Setup	Enter to set up Spot

＊ Default ID is ID1. If remote control malfunctions, please press, “DVR1” button to renew corresponding DVR ID.

4-8.1 DISPLAY SETUP

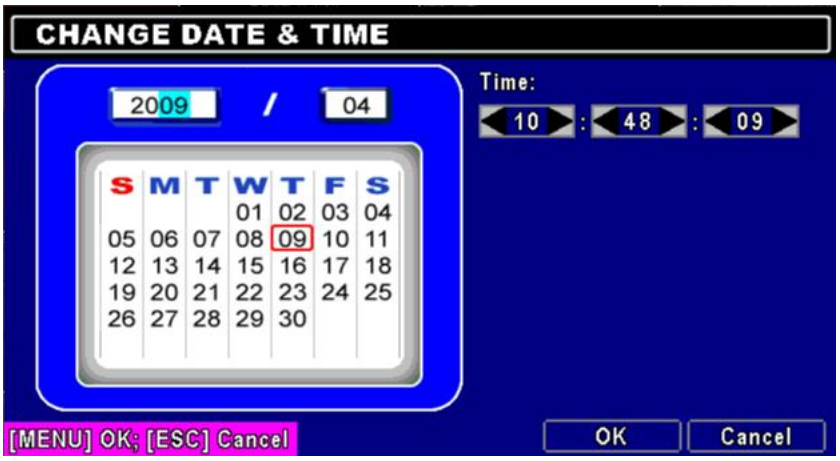
Item	Description
OSD	Turn On / Off OSD display
DVR Status	Turn On / Off DVR illustration and record status display
Date/Time	Turn On / Off date and time display
Message	Turn On / Off message display
Channel Name	Turn On / Off channel name display
Border Set	Set up the color of border in LIVE , PLAYBACK mode.（black、dark grey、light grey、white）

4-8.2 DATE/TIME SETUP

Item	Description
Hour Format	12HOURS/ 24HOURS
Date Format	MM-DD-YY/DD-MM-YY/YY-MM-DD
Date/Time Position	Choose the position of Time and Date display
Change Date & Time	Setup time and date of DVR
Time Zone Setup	Set up GMT and Daylight Saving Time.
Internet Time Setup	Setup automatic synchronization with internet server

4-8.2.1 CHANGE DATE & TIME

Users are allowed to setup date and time of DVR manually according to your local time.



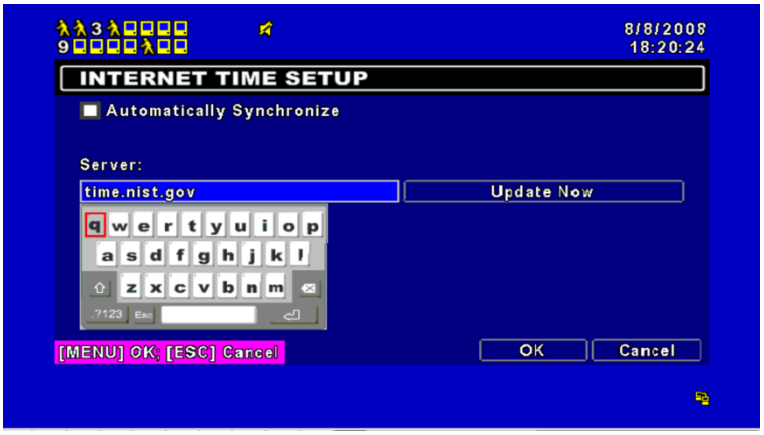
4-8.2.2 TIME ZONE SETUP

In time zone setup, users can change your time zone and activate Daylight Saving Time function according to your DVR location.

Item	Description
Select Time Zone	Enter to modify GMT from GMT- 13 to GMT+ 13
Daylight Saving Time	Turn on/ off Daylight Saving Time

4-8.2.3 INTERNET TIME SETUP

Synchronize your DVR time with internet time server.

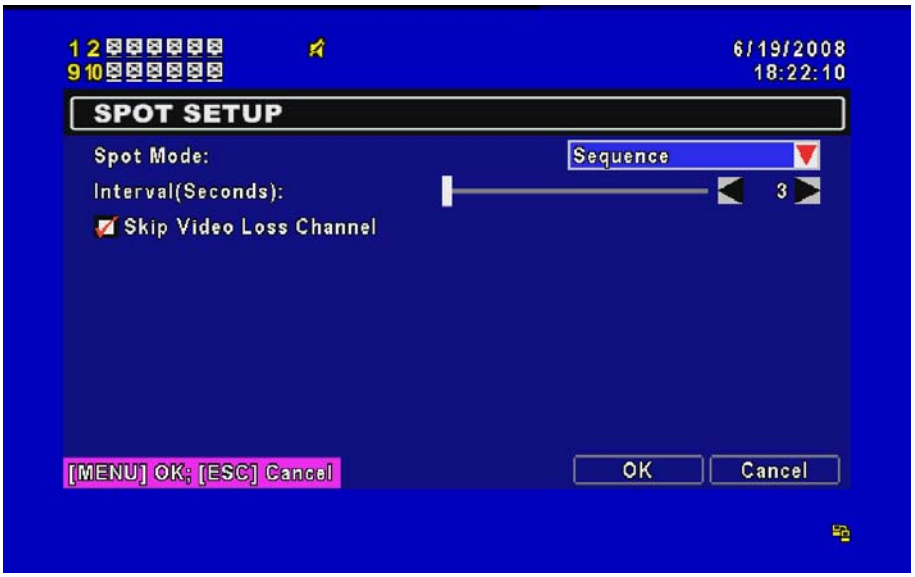


Item	Description
Automatic Synchronization	Check to enable DVR automatic synchronization function. Effective by this option selected, DVR will automatically synchronize the time upon rebooting or by every 24 hours after booting.
Update Now	Effectively, Date and Time show on DVR will immediately correspond with those in internet server.

4-8.3 BUZZER & RELAY SETUP

Item	Description
KEY TONE	Enable/Disable keystrokes.
Relay Switch Connection	Set relay signal to be Normal Close (N.C.) or Normal Open (N.O.).
Buzzer Duration	Set up the duration from 1~999 seconds.
ALARM BUZZER	Enable/Disable buzzer operation when the alarm is triggered for sensor, motion and vloss (Video Loss).
ALARM RELAY	Enable/Disable the signal to be sent to the RELAY OUT blocks when the alarm is triggered for sensor, motion and vloss.

4-8.4 SPOT SETUP



The DVR has two modes of video output; one is main video output, the other is spot video output. SPOT setup is for controlling the order of channels the system cycles through in SPOT mode. User can monitor every channel in the SPOT mode.

Item	Description
SPOT MODE	Channels display in spot for three different modes: **MANUAL:** select channels to display manually. **SEQUENCE:** Auto-sequence for all channels in order. **EVENT:** Display channels with event occurred.
Interval (Seconds)	The duration time in seconds for the interval between channels under SPOT mode.
Skip Video Loss Channel	Whether to skip channels without video signal.

4-9 UTILITY SETUP

Item	Description
HDD Initialization	Select to enter hard disk initialization menu. **Please stop recording before entering this menu.** Enter the menu, system will show all the data (model ,volume) of HDD that installed in DVR. Check the HDD you'd like to initialize then press "Start". HDD initialization is successful when the status shows "Succeed"
USB Initialization	Clean up all data on USB. Enter USB initialization and press YES to clean up all data on your USB. The initialization is done when it's showed "Succeed".
System Recovery	Restore system default values
Reset System Events	Reset all the recording events in DVR.
Copy Setup to USB	Copy configuration to a USB device. There will be a file named "sdvr.config" on your USB.
Download Setup from USB	Download configuration from a USB device into DVR.
Upgrade	Upgrade DVR through USB. Please stop recording and backup setup configuration before upgrading. **System will reboot automatically when the upgrade is completed.**

Notice! DO NOT TURN OFF POWER OR UNPLUG USB DEVICE DURING THE UPGRADE as it may cause incomplete firmware upgrade and damage to the DVR.

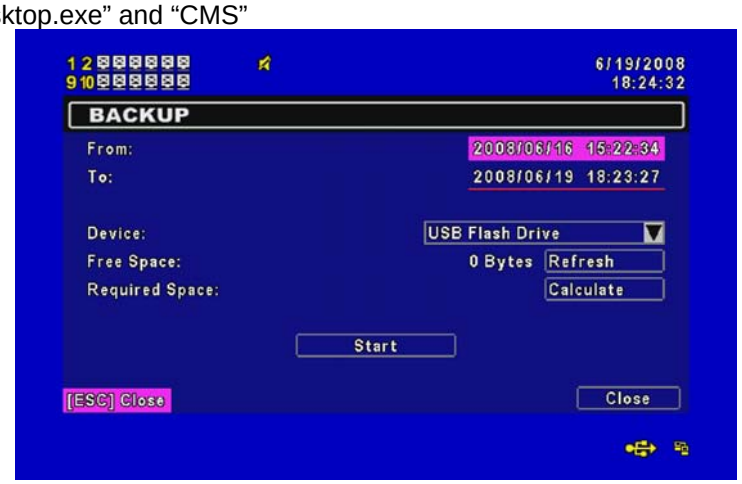
4-10 DIAGNOSTIC

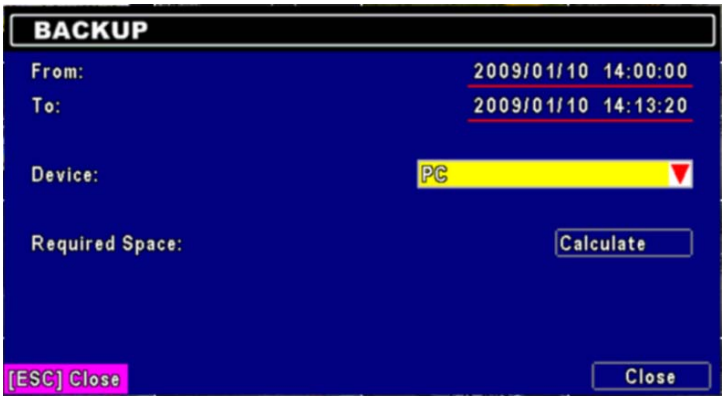
Item	Description
Version	The current firmware version of DVR
IP Address	The connected IP address of DVR. If disconnected from network, the screen will display" NETWORK DISCONNECT".
MAC Address	MAC Address of DVR
HDD Volume	The capacity of HDD
HDD Used Rate	Percentage of space used on HDD.
HDD Status	Shows HDD status. **USING** means the HDD is being used for recording now **GOOD/BAD** means the HDD has a known/unknown format for the DVR. (Note: Please initialize your newly-installed HDD before using it, otherwise it can be recognized as BAD by DVR.)
Format Time	The latest format time of HDD

CHAPTER 5 BACKUP & SEARCH

5-1 BACKUP SETUP

User can backup any segment of recorded data in a specified time frame. To do so, either a CD R/W or storage device, like USB, must be connected to the DVR. Recorded data can also backup into NB/PC through our remote access software: 「DVRemoteDesktop.exe」 and be saved in your assigned path. The format of backup file is *IRF* file that can be played by both "DVRemoteDesktop.exe" and "CMS"

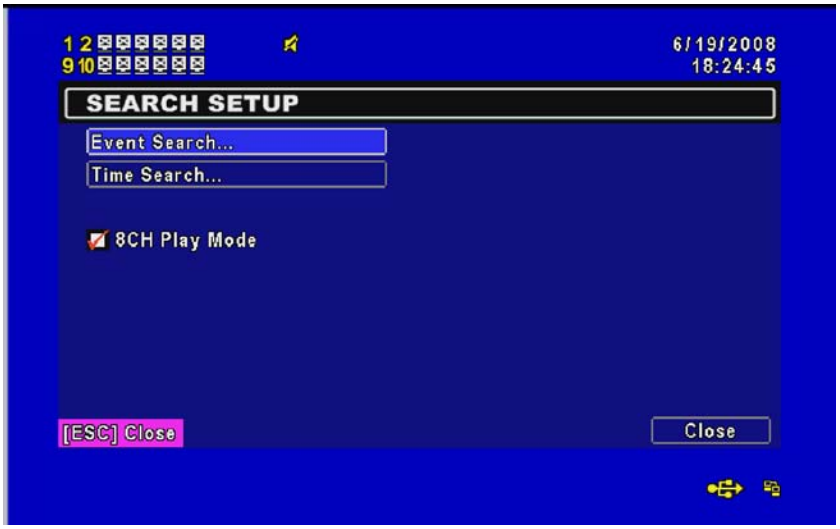




Item	Description
From	The start time of backup file
To	The end time of backup file
Device	Select USB, CD/RW or PC as the backup device
Free Space	The available space in your backup device. (not available for PC backup)
Refresh	Recalculate the available space of backup device. (not available for PC backup)
Calculate	Calculate the size of backup file
Start	Start backup operation. **Be sure to calculate the size of backup file BEFORE operating backup.**

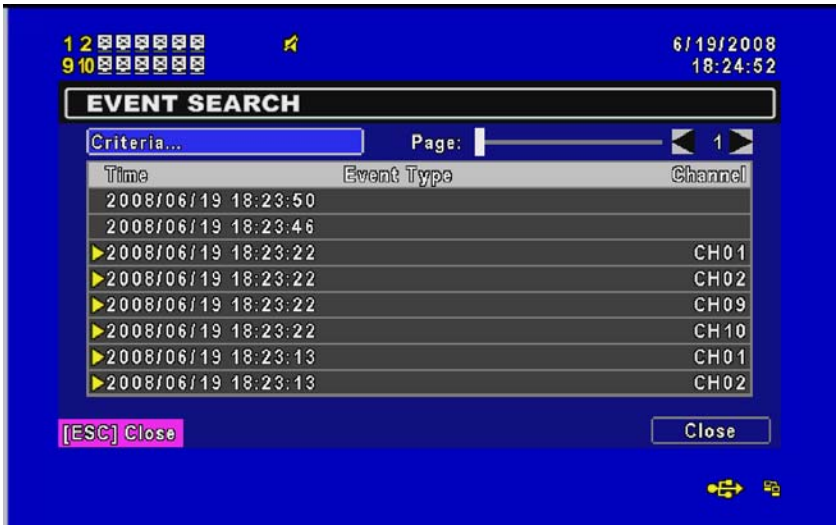
Note! Do not unplug the USB device or turn off the DVR during the backup process to avoid unrecoverable error.

5-2 SEARCH SETUP



Item	Description
Event Search	Press to enter event search menu
Time Search	Press to enter time search menu

5-2.1 EVENT SEARCH



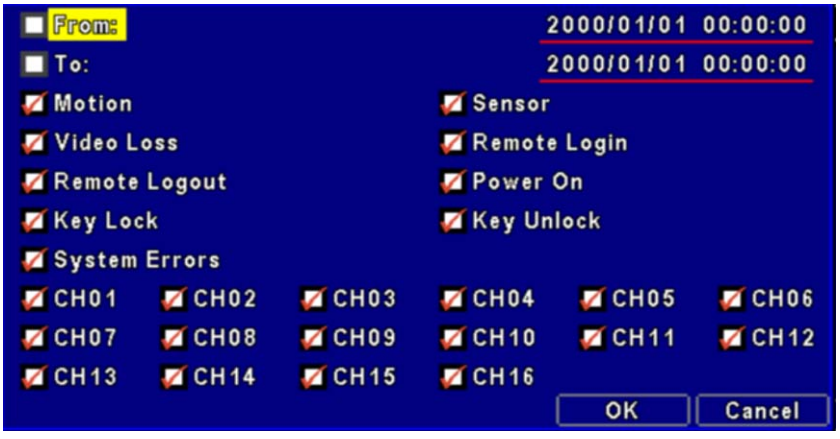
The DVR automatically records events with type, time and channel information included. If there is recording data for an event, a yellow signal will be shown on the left side of time information. Rest your cursor under the line and press “enter”, or left click your mouse to playback the recording data.

P.S. Event Records will still be generated even when hard disk is not installed or the record function is not activated. However, the record can’t be viewed after selecting it.

Item	Description	
Criteria	Setup conditions of event search	
Page	Switch between pages of events	
Date/Time	Date/time when event occurred.	
Event Type	Event type, defined as following	
	VLOSS	Video Loss
	MOTION	Motion Detected
	SENSOR	Sensor Detected
	REMOTEIN	user log-in over the network
	REMOTEOUT	user log-out over the network
	POWER ON	System Rebooting
	KEY LOCK	System key are locked
	KEY UNLOCK	System key are unlocked
	HDD FULL	HDD is FULL
Channel	The channel where event occurred.	

5-2.1.1 CRITERIA SETUP FOR EVENT SEARCH

The amount of events can be numerous. Therefore, you can facilitate event sorting by setting up “criteria”. Setup “start time” and “end time” for event search, then the search result will be limited to this specific period of time. Only checked events and channels will be sorted in event search.

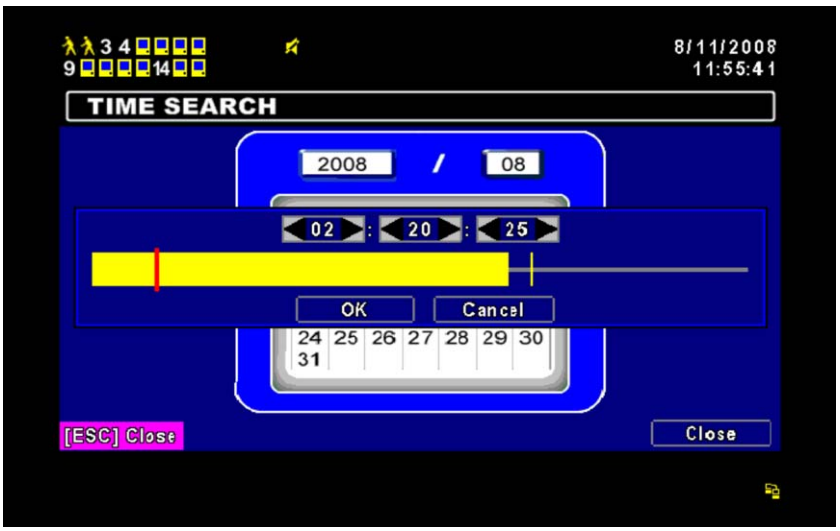


Note：4CH DVR will display 4 channels and 8CH DVR will display 8 channels.

5-2.2 TIME SEARCH

TIME SEARCH can search for the specific time of recording data to playback. To specify a date, use ◀ or ▶ to move the cursor up and down, use ▲▼ or roll the mouse to change dates. Press “Enter” or left click on the desired date to playback. Note that dates with recording data are marked with a red square “ □ “System will start playing back according to the date you selected. Calendar will be shown by using mouse to click on “year” and “month”.

Click “date” to display recording time of that specific date with time bar. You can change time (hour/minute/second) or click on a specific time of time bar by mouse then press “**YES**”. DVR will playback the selected recording data.

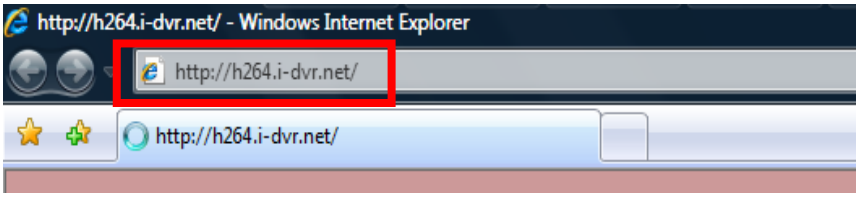


CHAPTER 6　NETWORK SURVEILLANCE

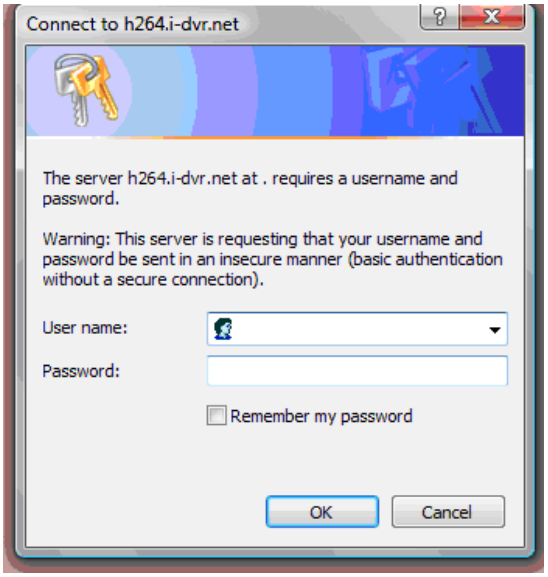
AP software:「DVR Remote Desktop」can allow you to remotely access and control the DVR from PC.

6-1 AP Software Installation and Setup

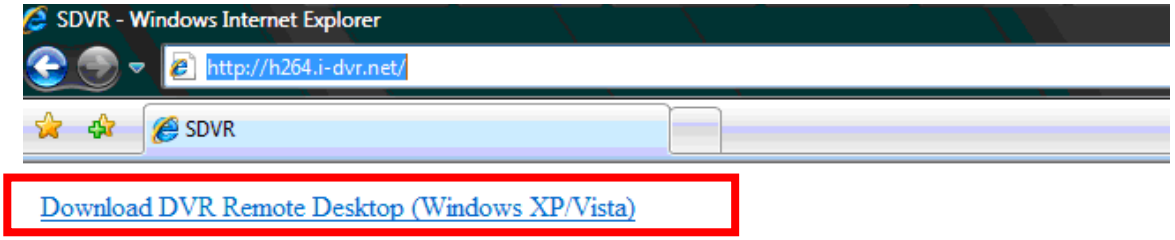
Step One：Enter the IP address of DVR in IE browser



Step Two: Windows as below will show up. Please enter the user name and password. Default user name and password is **admin/123456**. Other related setup about user account and password, please check **"4-5 Account Setup**. "


Connect to h264.i-dvr.net
The server h264.i-dvr.net at . requires a username and password.
Warning: This server is requesting that your username and password be sent in an insecure manner (basic authentication without a secure connection).
User name:
Password:
Remember my password
OK
Cancel

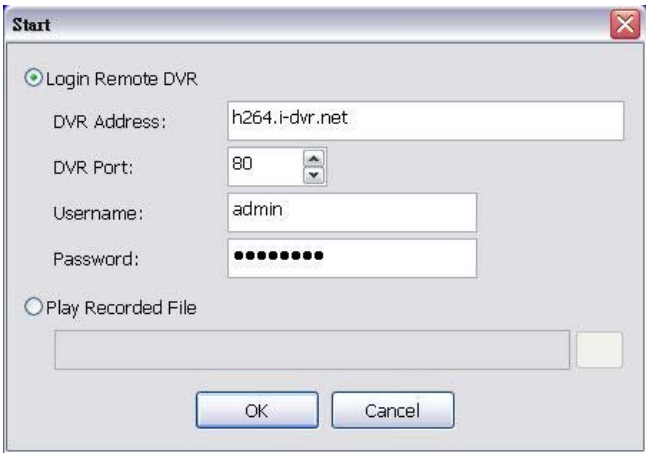
Step Three: Click on the link to start downloading the AP software.



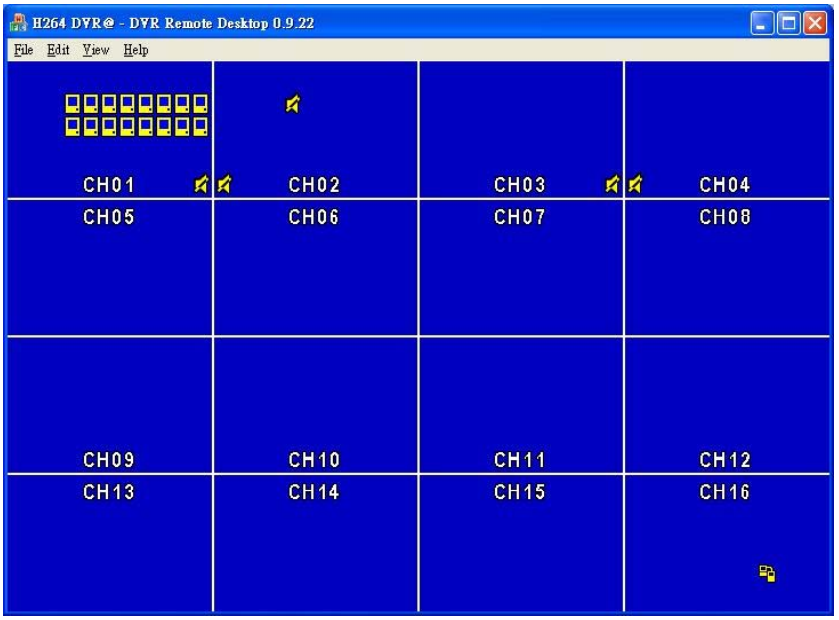
Step Four: Run or Save our AP software.

File Download - Security Warning
Do you want to run or save this file?
Name: DVRemoteDesktop.exe
Type: Application, 598KB
From: 122.147.0.91
Run
Save
Cancel
While files from the Internet can be useful, this file type can potentially harm your computer. If you do not trust the source, do not run or save this software. What's the risk?

Step Five: If you choose to run the software, Start window will be shown up. Please enter information of login DVR: IP, Port, Username and Password, or choose “Play Recorded File” to open backup files in your PC.



Step Six: You’ve logged into the DVR



6-2 AP Software Operation

Open the file “DVRemoteDesktop.exe”; enter the information of DVR “IP address”, “Port” “Username” and “Password” and click “OK”. You should be able to login DVR successfully and start to use the software. The default username and password is 「admin/ 123456」

“DVRemoteDesktop.exe” AP software provides some extra functions for remote users. Please check **Table 6-2.1** for detail information and **Table 6-2.2** for minimum system requirements for “DVRemoteDesktop.exe” operation. Table 6-2.3 is corresponding to Ethernet cable bandwidth. Please take this table for future references when applying for Internet bandwidth or connecting to Internet.

Table 6-2.1 Toolbar of AP software

File - Record to Local	Record data to your PC, including *LIVE* and *Playback*.
File - Play Recorded Files	Play recorded files “.irf”
File – Exit ／ Alt + F4	Close the AP software.
Edit - Channel Name／ F2	Edit channel name of your DVR including font, size italic, and boldface of characters. .
Edit - Reset Channel Name	Reset channel name back to default.
View - Hide Caption & Menu ／ F9	Hide the Caption and Menu
View - Disable resizing／ F10	Disable the function of resizing window.
View - Full screen／ F11	Switch it to full screen
View- Render Filter	Unable/ Disable the Bilinear function
View- Play All Frames	Unable this function will stop the audio transmission in order to improve the playback speed quality.
View- Language	Switch between languages for toolbar
Help – About	Show information about software and information

Table 6-2.2 System Requirements for AP software

CPU	Intel Pentium 4 above
OS	Microsoft Windows Vista、Windows XP SP2 above
RAM	512M above
VGA Card	Needed to support DirectX9.0 (Above) Note 1
Others	DirectX 9.0 above

Note 1:

Known VGA card that support DirectX9.0 currently:

NVIDIA: Geforce FXseries, Geforce 6series, Geforce 7series, Geforce 8series, Geforce 9series, Geforce 200series, etc.
Or
visit:http://en.wikipedia.org/wiki/Comparison_of_Nvidia_graphics_processing_units

ATI: Radeon R300series, Radeon R400series, Radeon R500series, Radeon R600series, Radeon R700series, Radeon HD 3xxx IGPseries, Mobility Radeonseries (9500 above), Mobility Radeon Xseries, Mobility Radeon HDseries, or FireGL Vseries etc.
Or visit: http://en.wikipedia.org/wiki/Comparison_of_ATI_graphics_processing_units

SiS: SiS 67Xseries, or SiS 77Xseries etc.
Or visit: http://www.sis.com/support/support_compare.htm

Intel: 91Xseries, 94Xseries, 96Xseries, G3Xseries, or G4Xseries, etc.
Or visit: http://en.wikipedia.org/wiki/Intel_GMA

Table 6-2.3 Network Bandwidth Requirement Reference

Resolution \ Quality		Highest	Normal	Lowest
D1	16CH	6.9~7.9Mfps	3.7~5.8Mfps	1.2~2.4Mfps
	9CH	6.5~8.2Mfps	3.6~5.8Mfps	1~2.6Mfps
	4CH	6.6~8Mfps	3.8~6Mfps	1.4~3Mfps
	1CH	6.2~7.6Mfps	3.6~5.7Mfps	1.2~2.5Mfps
HD1	16CH	3.6~5.4Mfps	1.9~3.5Mfps	890K~1.7Mfps
	9CH	3.3~5.6Mfps	1.8~3.7Mfps	900K~1.6Mfps
	4CH	3.4~5.1Mfps	1.8~3.8Mfps	850K~1.8Mfps
	1CH	3.7~6Mfps	1.6~4Mfps	870K~1.8Mfps
CIF	16CH	1.8~3Mfps	1.2~2.2Mfps	860~1.3Mfps
	9CH	1.9~2.9Mfps	1.2~2.5Mfps	750~1.2Mfps
	4CH	1.6~2.5Mfps	1.1~2.4Mfps	700~1.3Mfps
	1CH	1.8~2.9Mfps	1.4~2.6Mfps	720K~1.1Mfps

CHAPTER 7 SPECIFICAITONS

1. VIDEO		
Input Level		1.0 Vp-p±10% Composite, 75Ω Balanced
Display Speed	NTSC	480 fps(16CH), 240fps(8CH), 120fps(4CH)
	PAL	400 fps(16CH), 200fps(8CH) , 100fps(4CH)
Display Resolution	NTSC	720(H) X 480(V)
	PAL	720(H) X 576(V)
Monitor Output		2Vp-p Composite, 75Ω Balanced
2. RECORDING		
Compression Method		H.264
Recording Speed		Refer to table 7-1
Recording Resolution	NTSC	720 X 480, 720 X 240, 352 X 240
	PAL	720 X 576, 720 X 288, 352 X 288
Quality	Independent for each channel	Lowest/ Low/ Normal/ High/ Highest
Schedule		Setup by “minute” as unit
Mode		Manual / Event (Motion, Sensor) / Schedule
Method		By resolution, fps and quality Setup fps and quality separately for normal and event recording
3. SATA DEVICE		
Capacity	Internal Storage	3 HDDs or 2 HDDs + 1DVD-RW (16 CH) 2 HDDs or 1 HDDs + 1 DVD-RW (4CH/ 8CH)
	External Storage	1 HDD
Type		SATA / SATAⅡ compatible
External Bay Interface		E-SATA
4. ALARM		
Sensor Input		16(16CH), 8(8CH), 4(4CH)
Loop Out		1 Relay out
Motion Detection		Available per each camera/ Multi-detection level
5. CONNECTIONS		
Video Input		BNC 16 ports (16CH), 8 ports (8CH), 4 ports (4CH)
Video Output		BNC 2 port, VGA 1 port (Optional)
Audio Input		RCA 4 CH
Audio Output		RCA 1 CH
USB 2.0		USB memory stick, USB Mouse, USB Touch Panel
Remote		Remote control, 1-to-8 remote control (optional)
External I/O		1 RS-485, 16(16CH) / 8(8CH) / 4(4CH) sensor input, 1 Relay Output
Ethernet		1 RJ45 connector, 10/100 Mbps
6. ELECTRICAL		
Power Source		DC 12V / 6.25A (16CH) , DC 12V / 5A (8CH) , DC 12V / 5A (4CH)

7. ENVIRONMENTAL		
Operation Temperature		5℃ ~ + 40℃
Humidity		Less than 90%
8. PHYSICAL		
Dimension		430(W) x 293(D) x 55(H) mm
Weight		2.5kg (3.5kg including 1 HDD and CD-RW)
9. BACKUP		
BACKUP	USB Stick	Video Data, Audio
	CD-RW/DVD±RW	Video Data, Audio
	Network	Video Data, Audio
10. SEARCHING & PLAYBACK		
Searching Type		Event/ Time
Playback speed		120 FPS
11. MULTI-REMOTE SURVEILLANCE		
Monitoring Environment		Web / Client Software(CMS)
Max. client		Supporting multi-client (5 clients accessible)
12. OTHERS		
OS		Embedded Linux
Multi Task	Pentaplex	Live、Record、Playback、Network、Backup
Control Device		Front Keys / Remote Control / 1-to-8 Remote Control (Optional) Virtual Keyboard / Mouse / AP Software
PC Viewer		Direct monitoring of DVR's HDD on PC
Numbers of event list		10240

Table 7-1

Recording Speed (Independent setting for each channel)	NTSC	352 x 240	240fps / 16CH, 8CH 120fps / 4CH
		720 x 240	120fps / 16CH, 8CH 60fps / 4CH
		720 x 480	60fps / 16CH, 8CH 30fps / 4CH
	PAL	352 x 288	200fps / 16CH, 8CH 100fps / 4CH
		720 x 288	100fps / 16CH, 8CH 50fps / 4CH
		720 x 576	50fps / 16CH, 8CH 25fps / 4CH
Compression Method			H.264

CHAPTER 8 MOBILE APPLICATION INSTALLATION AND USAGE

You can remotely monitor all channels of DVR through your mobile device. The required mobile application is from DVR manufacturer and it supports mobile OS for both Windows mobile 5.0 above and Symbian.

Please confirm network function of DVR has been activated before mobile connection:
Main menu → Network Setup → HTTP Setup → Check the "Enable HTTP Server"

8-1 Mobile Application Installation and Operation for Symbian System.

Mobile Device: Nokia, SonyEricsson…etc.

System requirement:
GPRS/ 3G must be provided from your telecom service.
Mobile device that supports GPRS/ 3G protocol and Java cldc1.0/midp 2.0 environment

＊Please download both" DVRH264.jar" and "DVRH264.jad" to operate the function. Note that users with Sony Ericsson will only need to download "DVRH264.jar."

8-1.1 Mobile Application Installation

Please follow the steps cited below to perform the mobile device surveillance function.

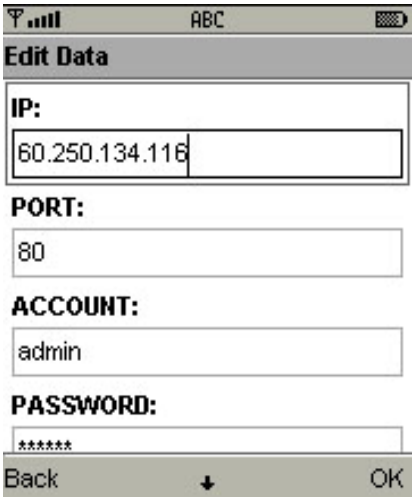
Step 1: The mobile application called "**DVRH264.jar**" need to be installed in your mobile device. The application can be downloaded directly from the manufacturer's website to your mobile or; alternatively, it can be transferred to your mobile device from the CD that packed with DVR through Bluetooth or USB cable.

Step 2: Install the application software "**DVRH264.jar**" in your mobile device. It might be installed automatically after downloading; otherwise, select it from the downloading file for installation.

8-1.2 Mobile Application Operation

After the installation, enter the Program Files menu in your mobile device to run a file called "**DVRH264**".

Select "Menu" at the right lower corner of your mobile screen, 4 commands, **Login Add Modify** and **Delete**, will show up.

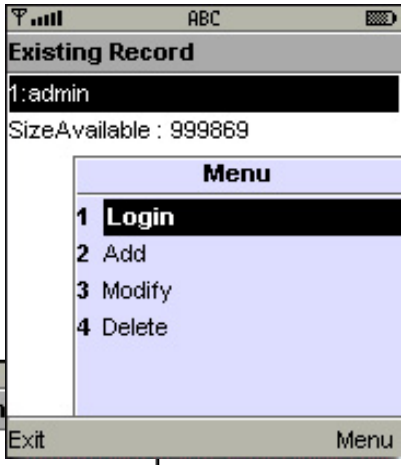


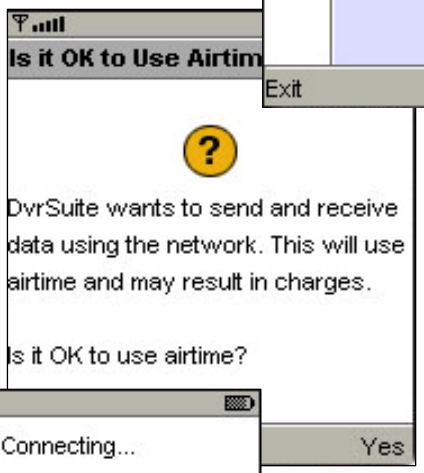
8-1.2.1 Add New Login DVR

To log into the DVR, you need to enter the logging-in DVR information. Find "**Add**" under the "Menu" then enter logging-in DVR's IP address, Port number, account name and password. Press "**Add**" to save this information after entering.

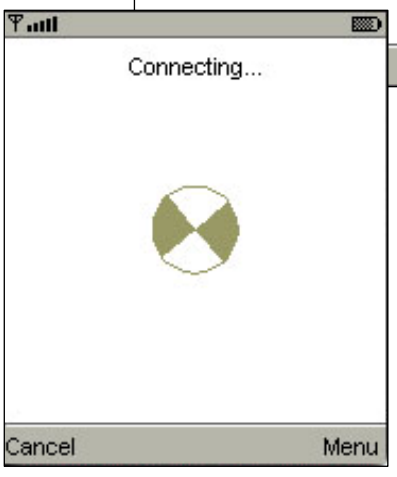
8-1.2.2 Logging Onto the DVR

Use the Login command to log onto a DVR and monitor live images. If multiple DVRs have been added to the mobile application, they will be listed by name, you can select one to log onto.




Is it OK to Use Airtim
DvrSuite wants to send and receive data using the network. This will use airtime and may result in charges.
Is it OK to use airtime?
Yes

A confirmation message might show up for network charge before connection. The fee rate will depend on the telecom company and package fee you go with.

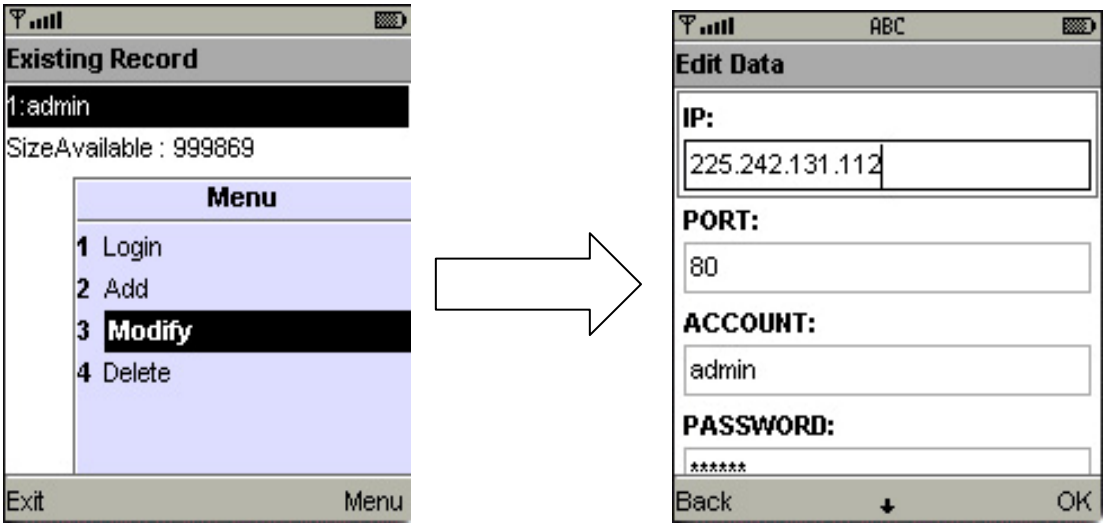


Network connectivity will take some time. It'll be affected by networking environment and bandwidth flow. Live image will show up after a successful connection.

PS. The *Live* can n ot be displayed in your mobile when the recoding is off in local DVR.

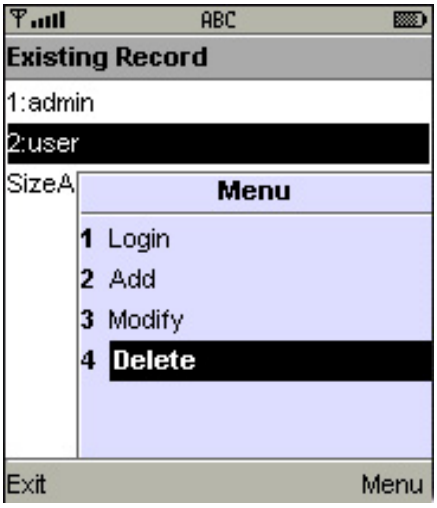
8-1.2.3 Modify the Login Information of DVR

You can use the "**Modify**" command to change the login information of DVR. The dialogue is identical to that of the "Add" command.



8-1.2.4 Delete the Login Information of DVR

"**Delete**" command can be used to remove the DVR information if it is no longer useful. Select the DVR on the name list then choose "**Delete**"



8-1.3 Live Monitoring Operation

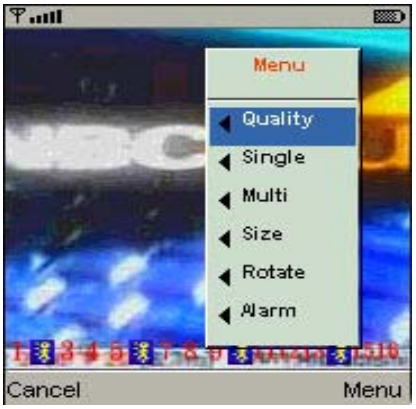
This paragraph describes some operation under the LIVE monitoring mode in your mobile device.

8-1.3.1 Scroll the Image

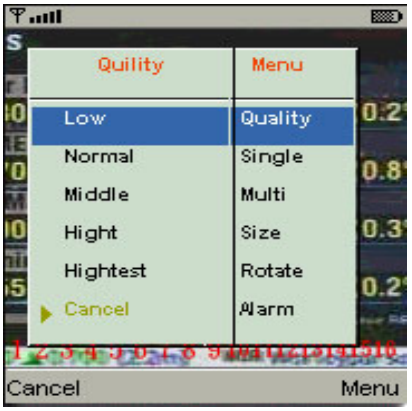
You can use the keypad on your mobile device to scroll the image if it's oversized.

Key	Action
2	Scroll Up
4	Scroll Left
6	Scroll Right
8	Scroll Down

8-1.3.2 Image Quality Setup



Select "**Quality**" under the "Menu"



There will be 5 levels for your to choose: **Low**、**Normal**、**Middle**、**High** and **Highest**.

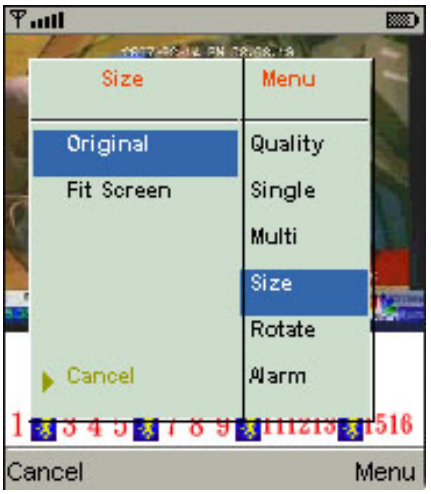
8-1.3.3 Channel Display

Select "**Single**" under the "Menu", there will be all channels of your DVR in list for you to choose.

PS. The *Live* can not be displayed when the recoding is off in local in your mobile DVR.

8-1.3.4 Size of Image

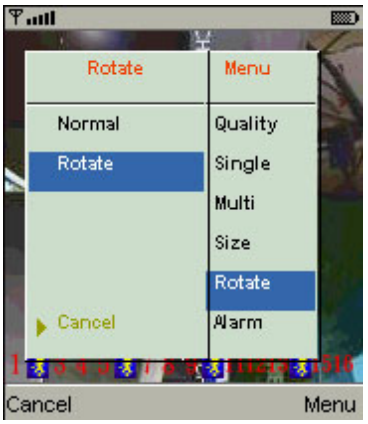
The screen size of different mobile device can be different. You can select "**Size**" under the "Menu" to choose from "**Original**" or "**Fit Screen"** to resize the display image.



Item	Description
Original	The image will be shown in original size.
Fit Screen	The image will be shown to fit the screen.

8-1.3.5 Rotate the image

The Live image can be displayed in normal or rotate to 90 degrees. Select "**Rotate**" under the "Menu" for this operation.



8-1.3.6 Alarm

This application not only allows you to remotely monitor through mobile device but receive the alarm that has been triggered by events such as Motion Detected, Sensor Triggered and Vloss.

Graphical icons below will be shown on the status:

: Motion detected

: Sensor triggered

: Video loss

Select the "**Alarm**" under the "Menu" to switch this function on or off.

8-2 Mobile Application Installation and Operation for Windows Mobile System

There are two kinds of applications for Window Mobile OS: JPEG compression and H.264 compression. The one for H.264 compression can transfer both audio and video signal to your mobile device.

System Requirement:

Mobile device OS：Windows mobile system 5.0 above.

Mobile device need to support internet: GPRS／3G／Wifi… etc.

8-2.1 Mobile Application Installation

Please follow the steps cited below to perform the mobile device surveillance function on your mobile device (mobile phone, PDA ...etc).

Step 1: The mobile application called **“Jrviewer.CAB”** and “**H264Pocket.CAB**” need to be installed in your mobile device. The application can be downloaded directly from the manufacturer’s website to your mobile or; alternatively, it can be transferred to your mobile device from the CD that packed with DVR through Bluetooth or USB cable.

Step 2: Install the application software **“Jrviewer.CAB”** and “**H264Pocket.CAB**” in your mobile device, two folders named ”**Jrviewer**” and “**H264Pocket**” will be created. It might be installed automatically after downloading; otherwise, select it from the downloading file for installation.

Start
2:06
ok
DVRViewerCab": was successfully installed on your device.
If you need more storage space, you can remove installed programs.

8-2.2 Mobile Application Operation

After the installation, enter the Program Files menu in your mobile device to run files named "**Jrviewer**" and "**H264Pocket**".

This application allows you to remotely logon and monitor DVR. Press "**OK**" to bring up the operation menu, see below chart to further information.

Item	Function	Description
Add	Add login DVR	Enter DVR's name, IP address, Port, Account user, Password then press "**OK**"
Login	Logon DVR	• Choose the DVR that you'd like to log on , then press "**OK**" • **PS. The *Live* can not be displayed in your mobile when the recoding is off**. • **PS. Network connectivity will be affected by networking environment and bandwidth flow. The fee rate will depend on the telecom company and package fee you go with.**
Modify	Modify Login DVR	Choose DVR, press "**Modify**", and press"**OK**" to save change.
Delete	Delete Login DVR	Choose DVR and press "**Delete**" to delete the DVR info.

The operation of **Jrviewer**

The operation of **H264Pocket**

8-2.3 Operation under the LIVE monitoring.

After successful logon the DVR, press “View” to bring up operation menu. You can choose the channel, resize the image, choose the quality, and turn on/off the status bar, alarm, full screen display….etc

8-2.3.1 Operation uner the LIVE monitoring for Jrviewer

Item	Function	Description
Channel 1~16	Display for CH 1~16	Choose from CH1~16 to display
Screen	Size of image	Original：image size as original Stretch：stretch the size as full screen Fit: resize the image to fit the screen
Quality	Quality	Change the quality of image. Please note the better quality, the slower data transfer rate.
Status Bar	Status Bar	Graphical icons indicated below will be shown on the status bar if there is event such as motion detected, sensor triggered and video loss to be detected on any channel. You can also uncheck the “**Status Bar**” to inactivate this function.
Alarm	Alarm	Alarm through your mobile device can be triggered if there is event to be detected. You can also uncheck the “**Alarm**” under the “View” to inactivate this function.

Icon	Description
	Motion Detect
	Sensor Trigger
	V-Loss

8-2.3.2 Operation under the LIVE monitoring for H264 Pocket

Item	Function	Description
Channel 1~16	Display for CH 1~16	Choose from CH1~16 to display. CH1~4 can receive audio signal.
Status Bar	Status Bar	Graphical icons indicated below will be shown on the status bar if there is event such as motion detected, sensor triggered and video loss to be detected on any channel. You can also uncheck the "**Status Bar**" to inactivate this function.
Alarm	Alarm	Alarm through your mobile device can be triggered if there is event to be detected. You can also uncheck the "**Alarm**" under the "View" to inactivate this function.
Full Screen	Full screen display	You can choose one channel to display in full screen by check this function.

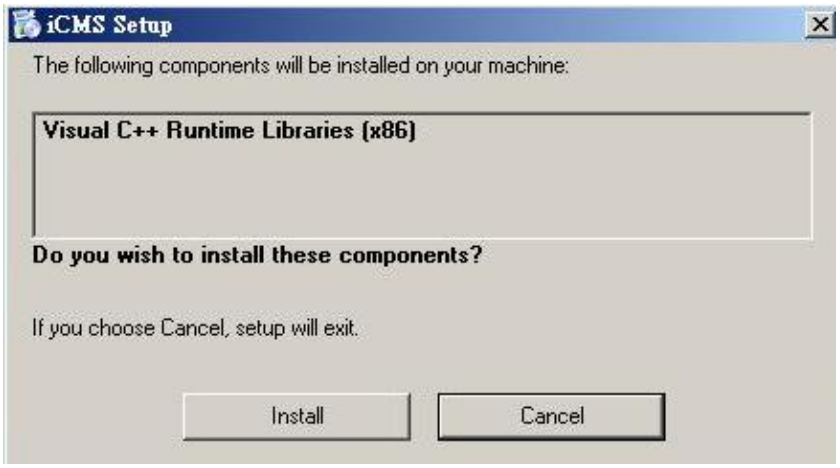
Icon	Description
	Motion Detect
	Sensor Trigger
	V-Loss

CHAPTER 9 CMS INSTALLATION AND USAGE GUIDE

9-1 CMS Installation

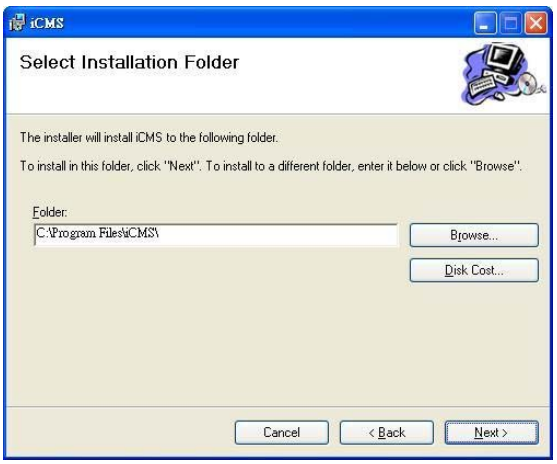
System Requirement:
∗Intel Pentium 4 processor or equivalent.
∗Microsoft Windows Vista、Windows XP、Windows 2003 Server.
∗Besides OS and other required APs, there will be 512MB remaining memory needed or above.
∗512MB memory above.(500M requested for group DVR connection and 180M for single DVR)
∗20MB HD space. Recording and image capturing require extra space for storage.
∗VGA Card needs to support DirectX9 and function well while running it. Please refer to p46 Note 1.

Installation:
1. Connect to the manufacturer's website and download the CMS software.
2. Decompress and execute "**setup.exe"**.
3. If "Visual C++ Runtime Libraries" has not been installed before in the operating PC, the following sign will suggest an installation automatically.

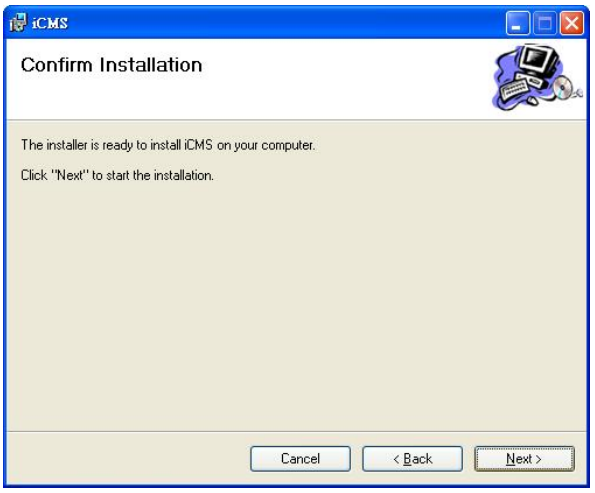

iCMS Setup
The following components will be installed on your machine:
Visual C++ Runtime Libraries (x86)
Do you wish to install these components?
If you choose Cancel, setup will exit.
Install
Cancel

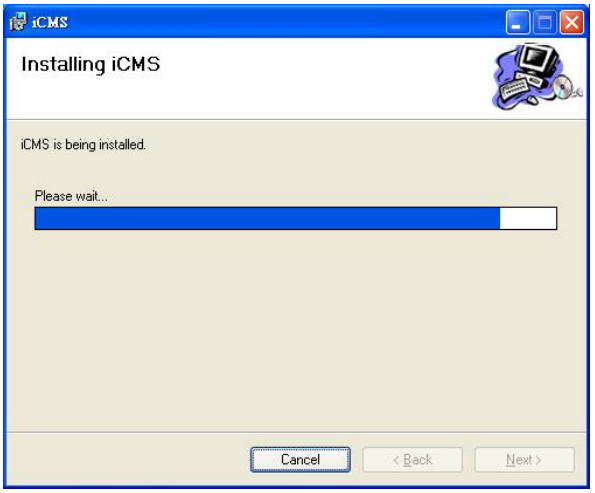
4. Select "**Next"**, and then select "**Browse"** to change installation path if needed. To check available space on hard disk, please select "**Disk Cost**" then please select "**Next**" to the next step.

iCMS
Welcome to the iCMS Setup Wizard
The installer will guide you through the steps required to install iCMS on your computer.
WARNING: This computer program is protected by copyright law and international treaties. Unauthorized duplication or distribution of this program, or any portion of it, may result in severe civil or criminal penalties, and will be prosecuted to the maximum extent possible under the law.
Cancel
< Back
Next >

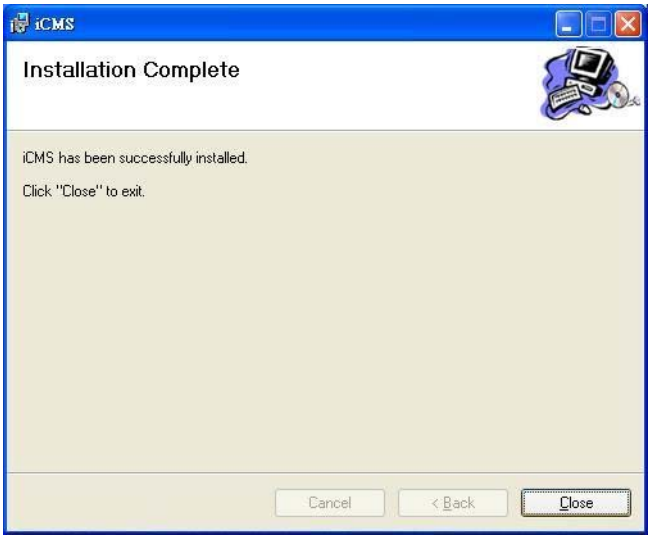

iCMS
Select Installation Folder
The installer will install iCMS to the following folder.
To install in this folder, click "Next". To install to a different folder, enter it below or click "Browse".
Folder:
C:\Program Files\iCMS\
Browse...
Disk Cost...
Cancel
< Back
Next >

5.”**Confirm Installation**” window shows. Select ‘**Next’** then the installation starts.


iCMS
Confirm Installation
The installer is ready to install iCMS on your computer.
Click "Next" to start the installation.
Cancel
< Back
Next >

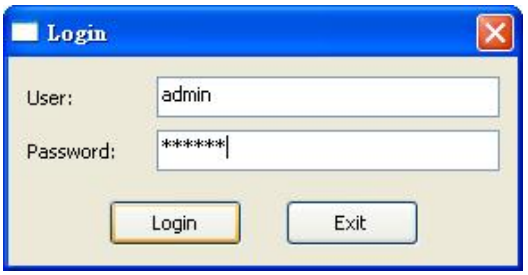


6. Select ‘**Close’** to finish installation when the “**Installation Complete**” window shows.

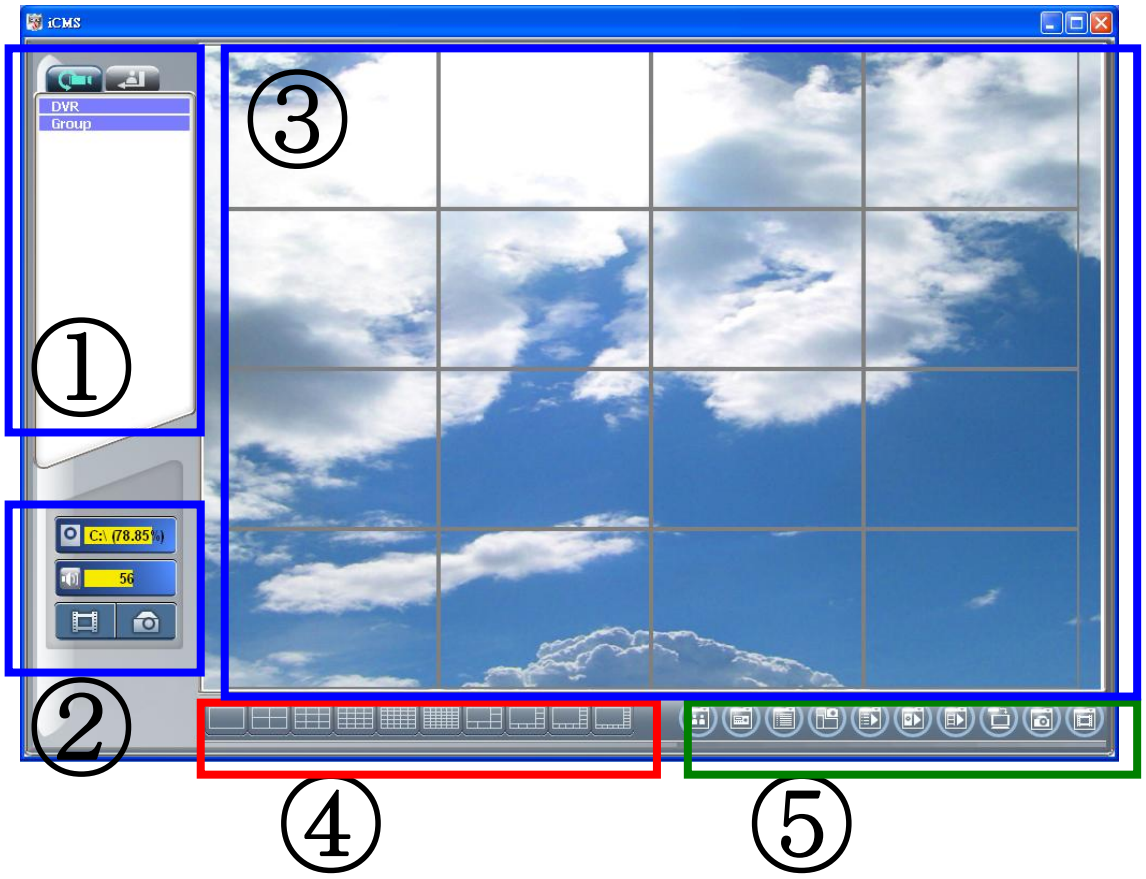


9-2 CMS LOGIN AND ENVIRONMENT

To enter CMS, the administrator's user name and password are required. The defaults are 'admin' and '123456'.



After successful login, the following image shows on your screen:



① **DVRs, Groups & Events**	Information about DVRs, groups and events. See "9-3 Information List" for more detail.
② **PC information and control**	Information about local PC's hard disk, volume, recording...etc. See "9-4 PC Information and Control" for more detail.
③ **Main Display**	Live image display area. See "9-5 Main Display" for detail.
④ **Display Modes**	Several choices of display modes supported by CMS.
⑤ **Operation Bar**	A set of 10 operations are provided by CMS. See " 9-6 Operation Bar" for detail.

9-3 DVRs, Groups & Events

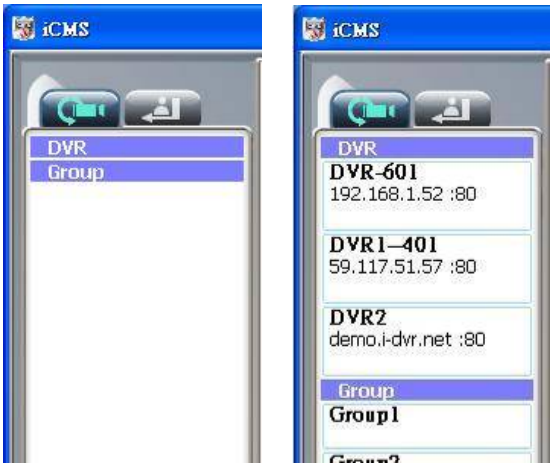
Icon	Description
	View list of logged in DVR／ Group.
	View Logs: list all the event information of DVR

9-3.1 View DVR／Group List

Single left click on '**DVR'** or '**Group'** will expand/collapse the entire DVRs and groups list.

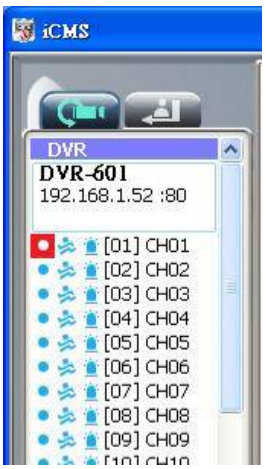
On the DVR list, **double left click on a connected DVR will show its image in main display.** See "9-6.2 DVR Administration" for further information.

On the Group list, **double left click on a group will show live image from the channels of the group in the main display.** See "9-6.3 for Group Administration" for further information.



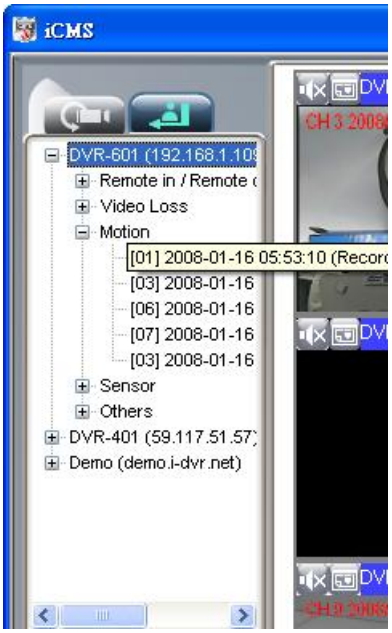
Left-clicking on a connected DVR will expand/collapse status of its all channels as below:

Icon	Description
	Video Loss
	Motion Detected
	Sensor Triggered



9-3.2 View Event Logs

Under this page, all the events of a DVR can be expanded/collapsed in the order of Re mote in/Remote out, Video Loss, Motion, Sensor, Others (Power Reset, Key Lock, Key Unlock, HD Full).



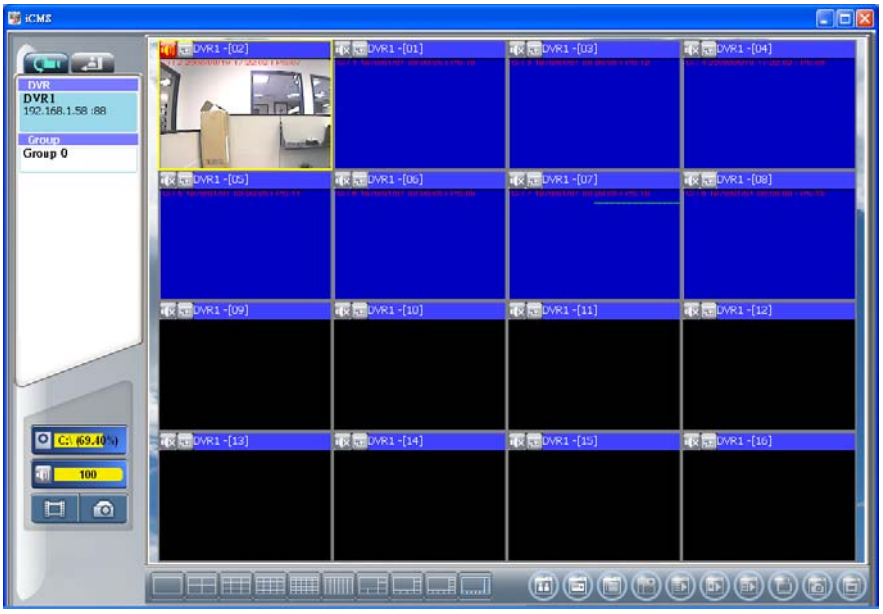
9-4 Local PC Information and Control

Located at the left lower corner of the screen, please see the chart below:

Icon	Function	Description
	HDD info	Shows the ratio of available space / HDD capacity of C:\ drive (where CMS is installed).
	Volume	PC volume or playback volume control bar.
	Recording	Record live image to local PC storage. To view locally stored data, use “Record” under the operation bar. Also see “9-6.6 recording data” for detail.
	Snapshot	Take snapshot to save in local PC storage. To view all the snapshots you’ve taken, please go to ” Snapshot” under the operation bar. See “9-6.5 Snapshot data” for detail.

9-5 Main Display

The main display area is where the live image of DVR is shown. You can drag to change the location of screen for each channel and turn on/off audio signal with mouse-click.



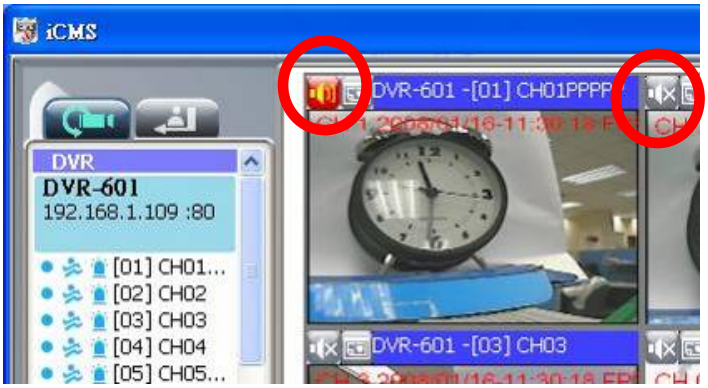
9-5.1 Audio Control

In live mode, you can turn on/off the audio signal of Ch1~Ch4:

Audio signal is On

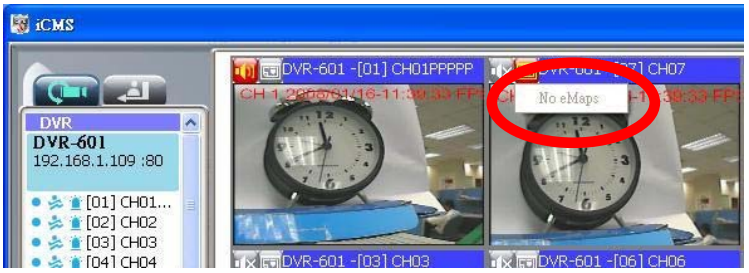
Audio signal is Off

Turn on/off by clicking on the graphical icon, please note there can allow only one chan nel's audio signal to be on at one time.



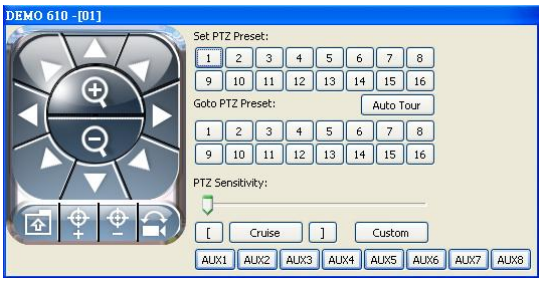
9-5.2 eMAP Display

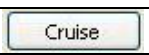
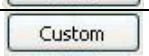
In Live mode, pressing will bring the e-MAP drag-down menu. If the channel has been set up to use e-MAP, the menu will show all the e-MAP titles that have been entitled to this channel; otherwise, "No eMaps" will be shown. Please check "**9-6.4 eMAP administration"** for setup information.



9-5.3 PTZ Control

In the main display, right click on the channel will bring up PTZ control panel as below.



Icon	Description
8 direction key	Rotate the PTZ
	ZOOM+ : Zoom in
	ZOOM : Zoom out
	Setup the PTZ spot as pre-set N.
	FOCUS+ : Focus in
	FOCUS- : Focus out
	Move to pre-set N.
Set PTZ Preset	Setup 16 pre-set N.
Goto PTZ Preset	Move to specific pre-set N.
	Activate auto pre-set tour*
PTZ Sensitivity	Setup PTZ sensitivity*
	Setup the "start" and "end" of li ner scan.*
	Activate the liner scan cruise.*
	Customization function
AUX 1~8 (For customization)	AUTO+1 ~ AUTO+8

* PTZ communication protocols from different brands aren't compatible 100% sometime s. Therefore, some of these functions may be unavailable.

9-6 Operation Bar

10 Operations to be listed as below:

Table 9-6.1 description of 10 operations:

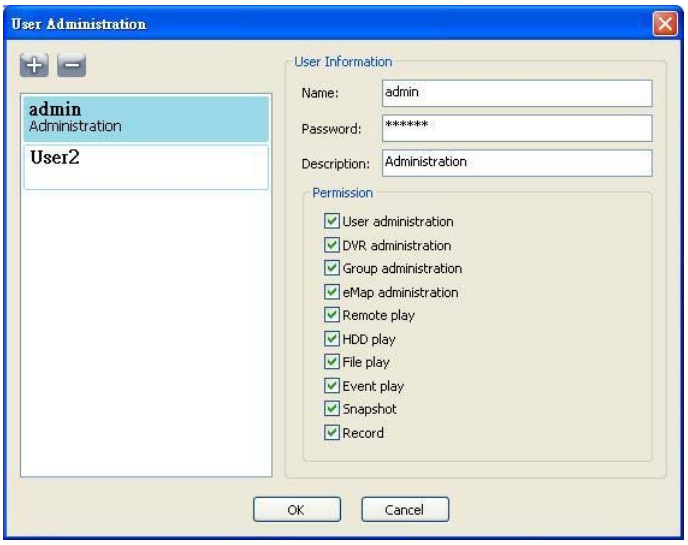
Icon	Description
	User Administration. Please see “9-6.1 User administration”
	DVR Administration. Please see “9-6.2 DVR Administration”
	Group Administration. Please see “9-6.3 Group Administration”
	eMap Administration. Please see “9-6.4 eMap Administration”.
	Remote Playback. Please see “9-6.5 Remote Playback”.
	HDD Playback. Please see “9-6.6 HDD Playback”
	File Playback. Please see “9-6.7 File Playback”
	Event Playback. Please see “9-6.8 Event Playback”
	Snapshot Data. Please see “9-6.9 Snapshot Data”
	Recording Data. Please see “9-6.10 Recording Data”

9-6.1 User administration

Before the CMS can be used on a PC, user accounts should be added with proper authority. Each user should also be assigned a password and optionally a description. If a user does not have certain authority assigned, he/she will not be able to operate the corresponding function on the Operation Bar. The default is none of the authority is assigned. The administrator should assign proper authority to each user. These user accounts can be deleted or edited later on.

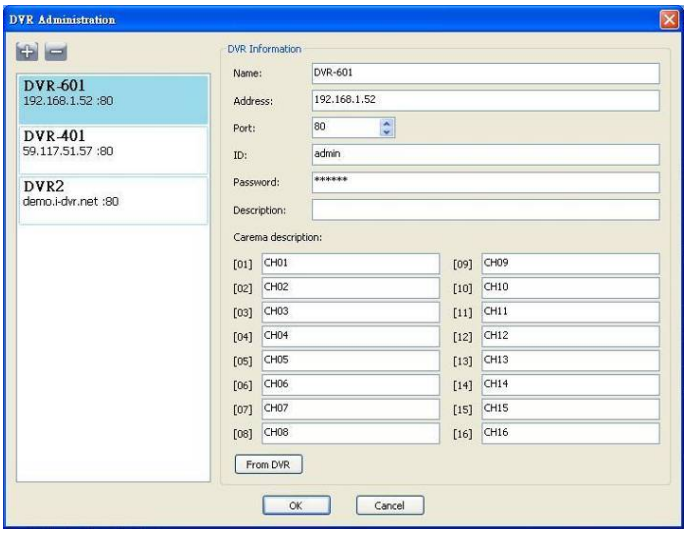
Select "**OK"** to save the setup.

Icon	Description
	Add a user account. The default authority is with none permission.
	Delete a user account.



9-6.2 DVR Administration

DVR connections can be added to or deleted from the CMS and their information can be edited. DVR's channel names can be entered here or downloaded from the DVR by pressing '**From DVR**'. Select "**OK**" to save the information.

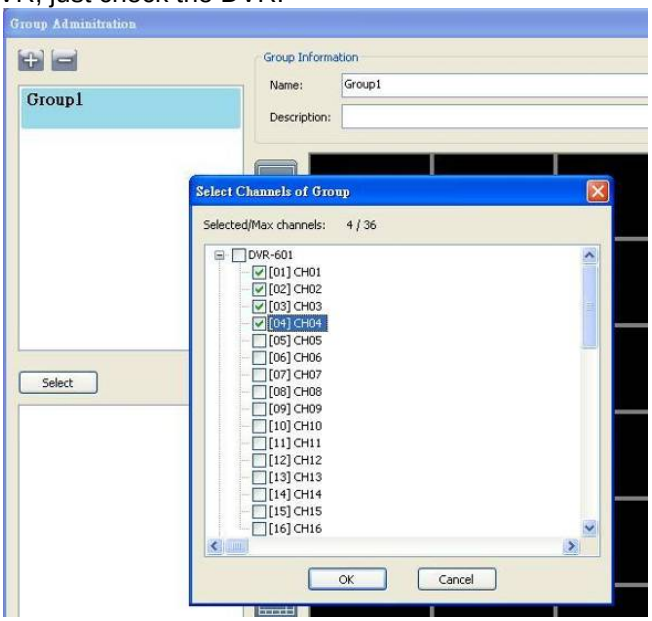


9-6.3 Group Administration

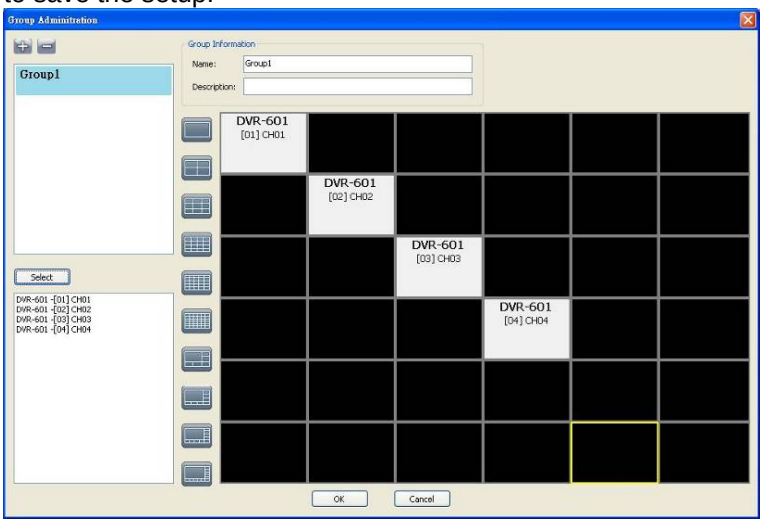
A ‘Group’ means a set of video channels from one or many DVRs, which means, user can organize channels from different DVRs to be set in a group. This function allows you to monitor and manager channels from multiple DVRs easily and flexible.

Steps:

1. Add a new group and set its name and description.
2. Click ‘**Select’** which will bring up a new window.
3. Check the specific channels that you’d like them to be included in the group. To include all channels of a DVR, just check the DVR.



4. Click “**OK**” to return to the previous window.
5. Select a display mode.
6. Drag a channel from the lower left panel into the main display to a preferred location. Or, change the channel location in the main display by mouse dragging.
7. You can ‘**Select’** again to add other channels, but the un-saved channel locations will be lost.
8. Click “**OK”** to save the setup.

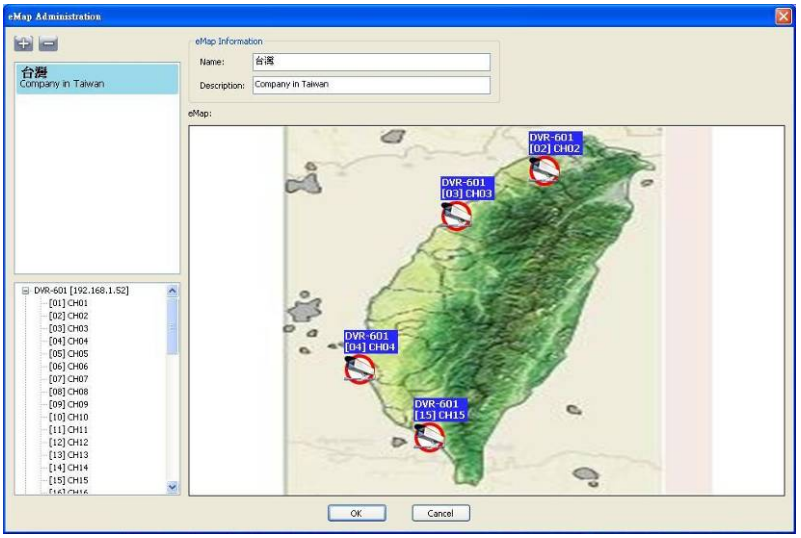


9-6.4 eMap Administration

If geographical locations are relevant, or if it is desired to use a picture as the background, eMap can be used for the purpose. With eMap, the background picture can be picked by the user and channels from multiple DVRs can be placed and dragged around on the picture.

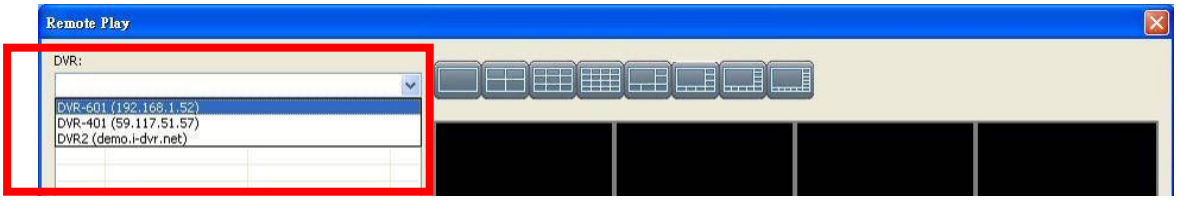
Steps to follow:

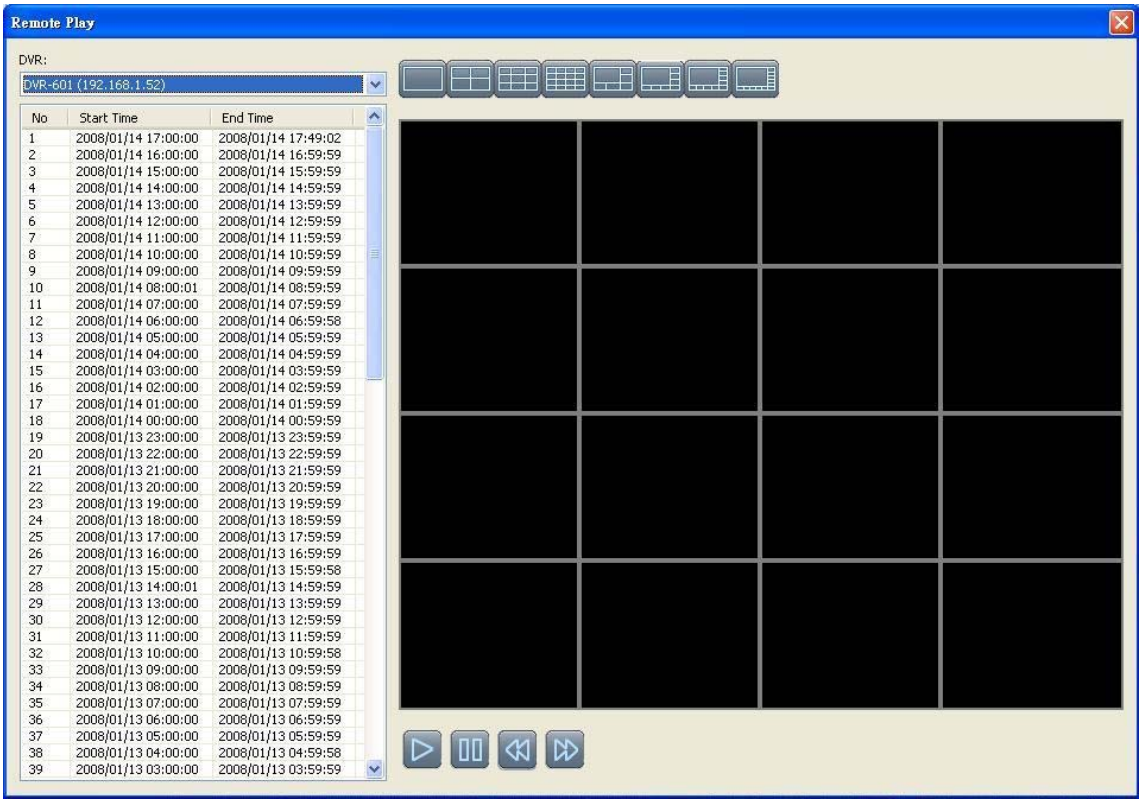
1. Click and a path for the picture will be prompted.
2. Select a picture, click OK and the picture will show in the right panel.
3. Drag channels in the left lower corner onto the picture to any position.
4. To delete a channel already on the picture, right click the channel and click ‘Remove’.
5. Click OK to save.



9-6.5 Remote Play

Video images recorded on a DVR can be displayed on a remote CMS. With Remote Play function, select a DVR and a display mode on top of the screen. After the recorded segments are listed below, double click on one to show its image on the right.

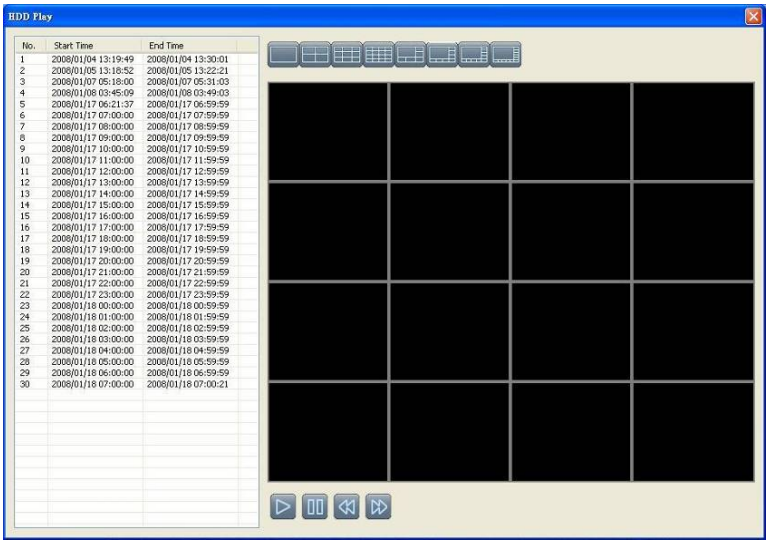




Icon	Description
	Start playing.
	Pause.
	Fast forward.
	Fast rewind.

9-6.6 HDD Playback

You can directly play the recording data in the HDD that's uninstalled from DVR by CMS. See the picture below, the left part of screen is recording data in list that's separated by hour and the right part is main display. You can change the display modes and play files fast forward or rewind.



9-6.7 File Playback

You can play the recorded **.irf** files by "File Play" in CMS. It allows you to change the display mode, forward or rewind the file and drag the time bar.

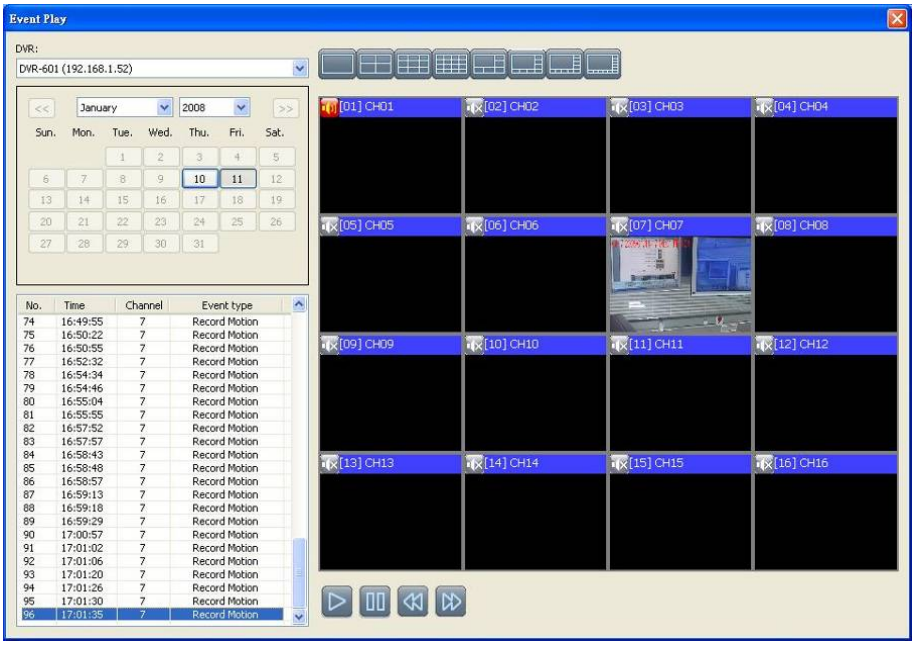
Icon	Description
	Start Playback.
	Pause.
	Stop playback.
	Fast forward.
	Fast rewind.

9-6.8 Event Playback

Event recordings on the DVR can be played back in CMS.

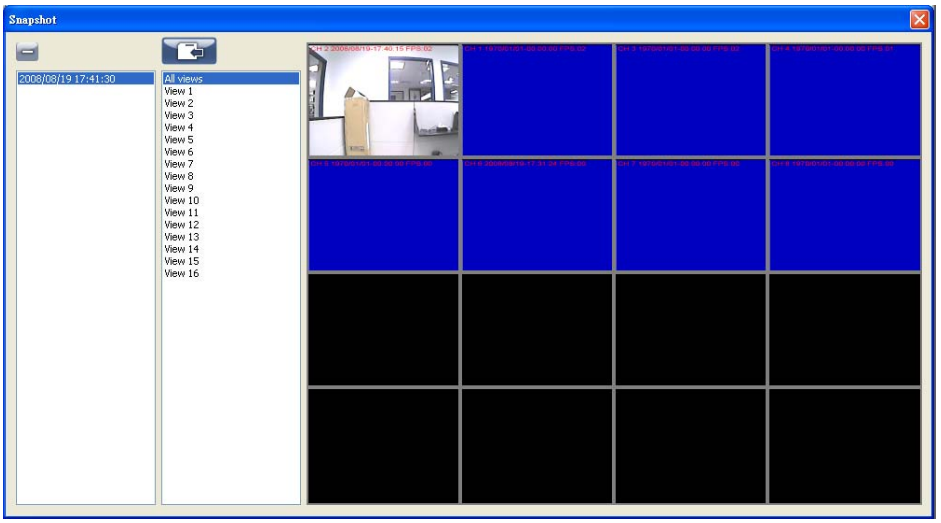
Steps to follow:
1. Select a DVR and a display mode.
2. Select a date.
3. Double click an event and play back the images on the right.

Use buttons at the bottom to control the playback.



9-6.9 Snapshot Data

It can display all the snapshots you've taken in line in "Snapshot Data". You can review, delete or save as other files here.

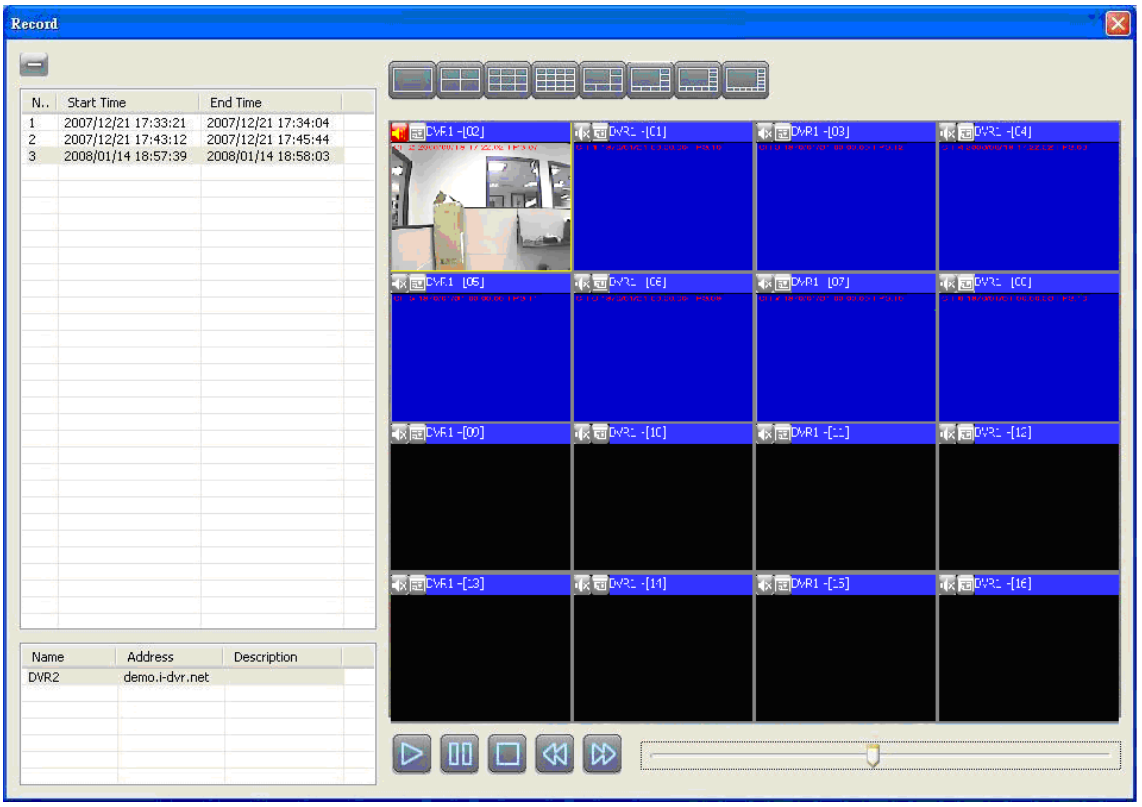


9-6.10 Recording Data

It can play all the recording files you've recorded in line in "Recording Data". You can play or delete them here.

Steps:

1 · Choose the recording time at upper left corner, it will be played on the main display.
2 · You can choose the display mode.
3 · Time bar will be shown at right lower corner, please drag the time bar to specify the recording time you'd like to play.

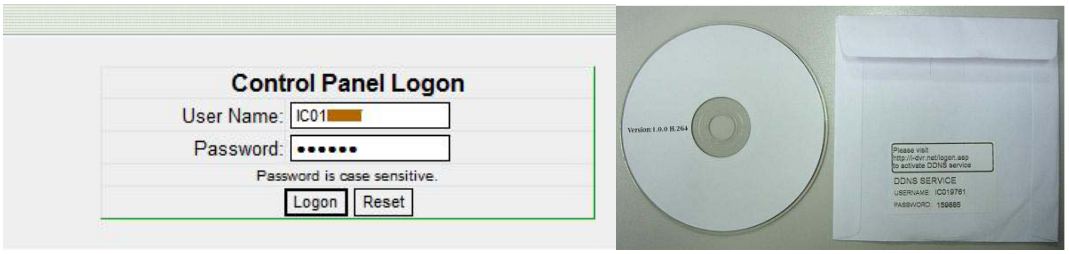


APPENDIX I I-DVR.NRT REGISTRATION

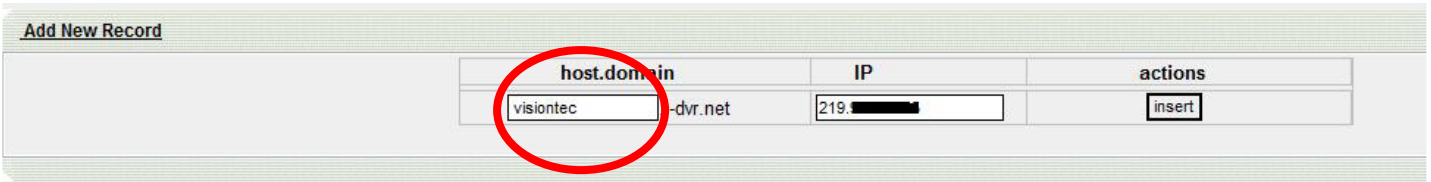
In the package of each DVR, you will find a sticker shows account information including username and password that allows users to login I-DVR.NET for registration.

To register DDNS on I-DVR.NET, please follow the steps as shown.

Step 1. Please open IE browser and then enter " http://i-DVR.NET/logon.asp " in IE browser bar. Next, "Control Panel Logo" dialog will appear. Enter the username and password provided by the sticker and then press, "Logon."

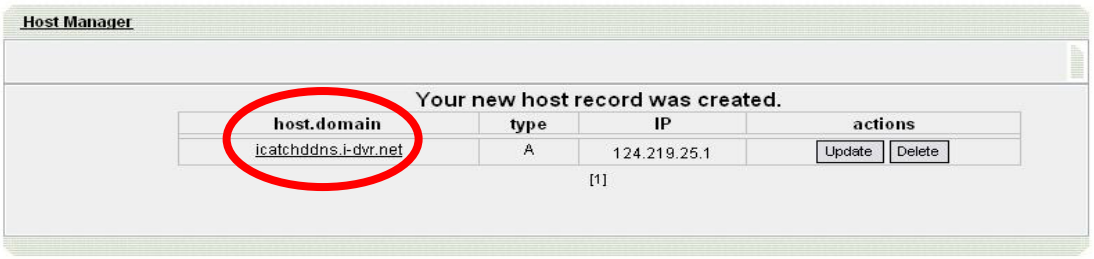


Step 2. After login successfully, enter name at "host" in "Add New Record" dialog. For example, "visiontec" is the host name, and then the address will be "visiontec.idvr.net." Select "Standard" type and enter an IP address of the DVR. Input known IP address if any, or press the "Add New" button if none.



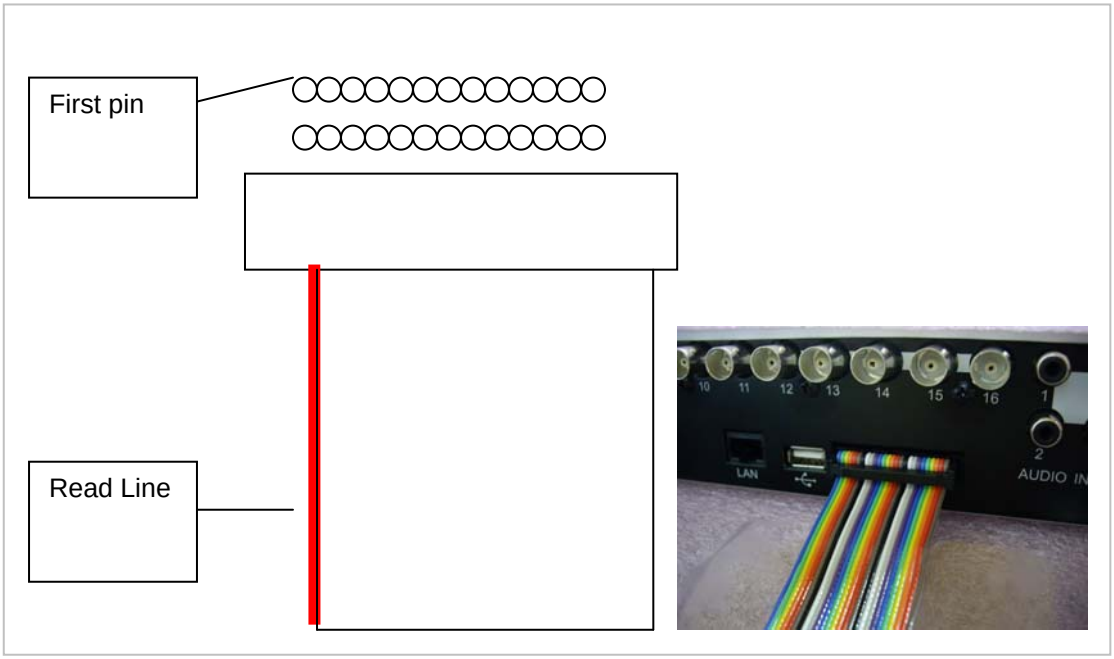
Step 3. The "Host Manager" dialog will show "Your new host record was created" when user setup successfully. The **host.domain**" column will show up the setup just entered.

If DDNS set up at DVR side successfully, the website will update the IP information in one minute. The IP column will be renewed to the corresponding IP address by pressing "F5: refresh" button.



Step 4. Enter DVR →Main Menu → Network Setup → DDNS. Activate DDNS functions and input related information.

APPENDIX II DB 26 Definition (For 16CH DVR only)



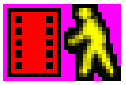
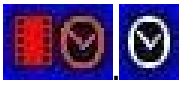
NUM.	WIRE	COLOR	NUM.	WIRE	COLOR
1.	GND	BLUE	14.	SENSOR 4	ORANGE
2.	GND	GREEN	15.	SENSOR 5	RED
3.	RS 485_B	YELLOW	16.	SENSOR 6	BROWN
4.	RLY1_NO	ORANGE	17.	SENSOR 7	BLACK
5.	RS485_A	RED	18.	SENSOR 8	WHITE
6.	RLY1_COM	BROWN	19.	SENSOR 9	GRAY
7.	VCC +5V	BLACK	20.	SENSOR 10	AMETHYST
8.	RLY1_NC	WHITE	21.	SENSOR 11	BLUE
9.	IR_LED	GRAY	22.	SENSOR 12	GREEN
10.	GND	AMETHYST	23.	SENSOR 13	YELLOW
11	SENSOR 1	BLUE	24.	SENSOR 14	ORANGE
12.	SENSOR 2	GREEN	25.	SENSOR 15	RED
13.	SENSOR 3	YELLOW	26.	SENSOR 16	BROWN

Note: Pin Num.9 allows extending IR receiver wire.

Brief connection method instruction:
If it's connected externally to RS485 device (such as dome camera), please connect 485 + (positive charge) to the 5th cable and connect 485- to the 3rd cable.
If it's connected externally to sensor device (such as infrared sensor), please connect th e positive charge of equipment to the sensor (1~16) needed to be triggered and connec t the negative charge to any of GND cable (1, 2, 10.)

APPENDIX III Record Mode Comparison

Comparison between different setups while in Default Record mode and after it's been s witched.

Schedule Record-Motion	Schedule Record-Sensor	Default Record Mode	After Switch Record Mode
Enable	Enable	Default Record Activated	Record and EventR ecord have both been activated 
Enable	Disable	Default Record Activated	Stop Record
Disable	Enable	Default Record Activated	Record when event occurs, and stop when none. 
Disable	Disable	Default Record Activated	Stop Record